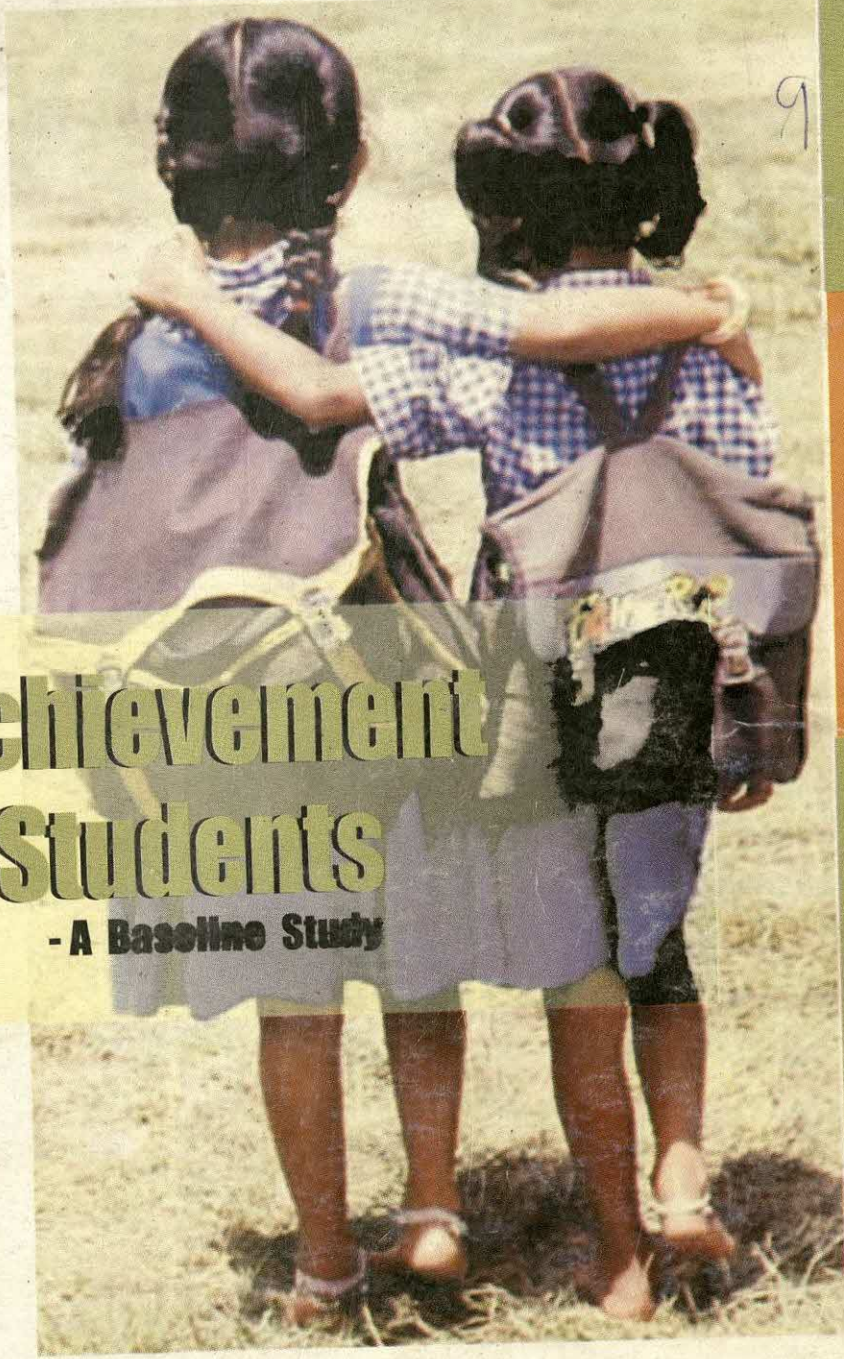


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Learning Achievement of Class V Students

- A Baseline Study

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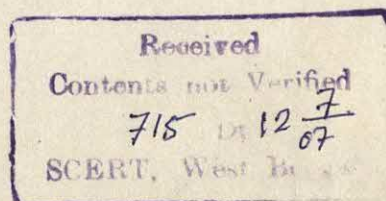
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NCERT



Learning Achievement of Class V Students

- A Baseline Study

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Learning Achievement of Class V Students

- A Baseline Study

PROJECT TEAM

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DR. SANTOSH KUMAR**



**राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING**

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Preface

Universalisation of Primary Education has remained the concern of the nation for more than four decades. Many inputs have been provided to the school education system and results are visible in terms of access, equity and quality. The gaps between social groups, genders and areas have somewhat narrowed but these are still prevailing. Concerted efforts are needed in this direction to bridge the gaps further.

NCERT, as an apex body in school education has contributed significantly by developing curricula, textbooks, providing supplementary reading material, training teachers and other state functionaries and conducting researches in different areas. The few achievement surveys have also been conducted by NCERT in the past to assess the qualitative change in pupils learning. The last nation-wide achievement survey was undertaken in 1990 in Language and Mathematics. During the last decade many important schemes have been implemented by both the states and Central Governments. To-day a large scale nation-wide data on achievement levels are needed by the policy planners, decision makers, educationists and teachers for improving teaching-learning processes. The present study with the same objective, was initiated in the year 2000. The focus was on measuring the students achievement in three main curricular areas of Environmental Studies, Languages and Mathematics in all states/UTs. Consequently, data collected from 4787 schools, 10796 teachers and 88271 students covering 105 districts from 27 states and 3 Union Territories have been analysed.

The study throws light on the profiles of schools, teachers and students across the nation. A section of this study is devoted in measuring learning achievements of students in the curricular areas of Environmental Studies, Mathematics and Languages. A comparison of students achievement across states/UT has also been presented. It is a known fact that home and school environment also contribute to students achievement. Therefore efforts have been made to capture the influence of home, school and teacher related variables on students achievement.

The present report comprises on three parts. The first part gives an account of the necessity of the survey, methodology adopted in developing tests and procedure for sampling of districts, areas, schools and students. The synthesis of results for the nation and contribution of intervening variables form the second part of this report. The state reports and different appendices are given in the last part of the report.

This voluminous work is the contribution of many persons. The first and the foremost is the unstinted support extended by the Director, NCERT without which this task could not be completed. Prof. (Mrs.) Sarla Rajput, Head, DEME has contributed significantly through her administrative and academic support. I express my sincere thanks to her. The contributions of Prof. Mamta Agrawal in developing the language tests is appreciated. My thanks are due to Prof. Ved Prakash, former Head, DEME for initiating and supporting the study.

I have received an encouraging cooperation from Directors of SCERTs, Principals of SIEs, Directorates of Education and other state agencies for the conduct of this achievement survey. All State Coordinators have taken the arduous task seriously and completed all field activities in time inspite of all the odds. I compliment each one of them with a great sense of satisfaction. I thank all my colleagues in the Department and in the Department of Educational Survey and Data Processing, office staff especially Shri Parash Ram Kaushik for their contribution and support in carrying out the survey work efficiently. My thanks

are due to Dr. B.M.K. Raju, Mr.R.N. Sahoo and Mr. Pardeep Kumar for re-examining part of the results of this study.

I earnestly hope that the findings of the present study will be useful to policy makers, planners, educationists and researchers alike.

Suggestions are most welcome and will be earnestly solicited.

Avtar Singh
Professor

September, 2006
New Delhi

Department of Educational Measurement and Evaluation
National Council of Educational Research and Training

Acronyms

AEC	Area Education Committee
BAS	Baseline Achievement Survey
BLC	Basic Learning Competency
DIET	District Institute of Education and Training
DPEP	District Primary Education Programme
EFA	Education for All
IAEEA	International Association for Evaluation of Educational Achievement
MAS	Mid-term Achievement Survey
MLA	Monitoring Learning Achievement
MHRD	Ministry of Human Resource Development
MCD	Municipal Corporation of Delhi
NCERT	National Council of Educational Research and Training
NDMC	New Delhi Municipal Council
NIEPA	National Institute of Educational Planning and Administration
NPE	National Policy on Education
OECD	Organisation for Economic Cooperation and Development
PISA	Programme of International Students Assessment
POA	Programme of Action
PTA	Parent Teacher Association
SCERT	State Council of Educational Research and Training
SEB	State Education Board
SIE	State Institute of Education
SIEMAT	State Institute of Educational Management and Training
SMC	School Management Committee
SSA	Sarva Shiksha Abhiyan
TAS	Terminal Achievement Survey
UEE	Universalisation of Elementary Education
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VEC	Village Education Committee
WCEFA	World Conference on Education for All

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Executive Summary

OBJECTIVE

Education is intended to develop basic learning skills, reading, writing, arithmetic and life skills necessary for the children to survive and improve the quality of life. During childhood, developments in the domains of literacy and numeracy take place through acquisition of basic learning competencies (BLC). These competencies represent levels of learning in a particular subject comprising basic knowledge, understanding, abilities, interests, attitudes and values. The competencies are essentially to be acquired by the end of a particular stage or standard of education. As far as the primary stage is concerned it is in fact the foundation stage for the development of basic competencies.

Primary education, in particular, has remained a serious concern of the nation since independence. A large number of programmes and schemes have been initiated both by the union and state governments to realise the goal of the universalisation of primary education. This has led to the opening of a large number of schools with emphasis on enrolment and retention coupled with focus on quality of education. The quantitative expansion seems to have diluted the quality of education. Research studies conducted both at national and state levels point out low level of learning in schools and the situation becomes worse as children move to higher classes. Poor level of achievement at primary stage is a big de-motivating factor resulting in repetition and drop out from the schools.

Though there are a number of factors which determine the quality of education, the most vital one that attracts the attention of one and all is the level of achievement. These levels of achievement for any nation are so important that they need to be known periodically to keep a tab on the general health of the education system. Such a requirement warrants the conduct of periodical achievement surveys at different stages of school education in order to initiate remedial measures for improving the quality of education. National Policy on Education (NPE) - 1986 recommended the conduct of periodical achievement surveys at all stages of school education. This has also been reiterated in the National Curriculum Framework for School Education-2000.

Since 1990 no major achievement study on all India basis has been undertaken. More than a decade has elapsed and a concern has been expressed both at the state and national levels for conducting a large scale achievement survey to know the health of our education system. NCERT has also been thinking of institutionalising the periodic achievements surveys. Therefore, this survey was undertaken. The objectives of this study were:

- To study the level of achievement of children in Language, Mathematics and Environmental Studies at the end of Class V
- To study the differences in achievement, categorywise, areawise and genderwise.
- To study the influence of intervening variables like home, school and teacher on students achievement.

TOOLS

For capturing the learning attainment of students across the states, tests in the three main subjects were developed and standardised. These tests were produced in 17 Indian Languages and used in different states/UTs. Each test used in achievement survey had 40 multiple choice items. In EVS most of the test items were based on concepts related to daily life activities, environment, health, hygiene, food functions, powers of different organs of democracy etc. In Mathematics the test items broadly covered number system, four fundamental operations, problems involving, HCF, LCM, decimals, fractions, percentage and its simple applications, sale-purchase, average, mensuration, and problems on geometrical figures etc. The Language test had two parts. The first part contained 20 items testing usage and grammar. A number of competencies testing grammatical structures, use of appropriate vocabulary, use of correct spelling and recognition of errors etc. were covering this part. The second part of the test focused on the reading ability of the students. It contained three different activities. The first activity was based on the comprehension of different signs and hoardings that children come across at different places. In the second reading activity, a school time table has been given and the children have to interpret it. There were two unseen passages which were not only interesting from students point of view but also value oriented. The questions on these texts were set to evaluate the students ability to locate informations, grasp ideas and indentify the theme of the passage, identify relationships between ideas, events, characters etc. and to interpret ideas and events. To study the influence of school and home environment on students achievement, three questionnaires e.g. School Questionnaire, Teacher Questionnaire and Pupil Questionnaire were also developed and used for collection of relevant information.

SAMPLE

Multistage stratified random sampling design was used for the selection of districts, rural blocks, urban areas, schools, teachers and pupils from each state and Union Territory of the country. It was planned to select 10% districts with a minimum of 4 districts from each state except Goa which had only two districts and one of them was selected. Each Union Territory was considered as one district. Finally, 116 districts were selected for the survey. From each selected district, four rural blocks and three urban areas were selected. Further, from each district a maximum of 50 schools were selected both from rural blocks and urban areas on proportionate basis. From the sampled school, a maximum of 30 students of Class V were selected. Teachers teaching EVS, Mathematics and Language to these students were selected for filling teacher questionnaire.

Out of 35 states/UTs, Jharkhand state and three UTs i.e. Lakshadweep, Dadar and Nagar Haveli and Daman and Diu could not participate in this survey. Meghalaya state participated in the survey but could not be included in this report as the data received was incomplete and of very few schools. Therefore, the data from 88,271 students, 10,796 teachers, 4787 schools from 105 districts spread over 27 states and 3 UTs was collected.

ANALYSIS

Keeping in focus the objectives of the achievement survey, a detailed 'Framework for Analysis of Data' was developed. This framework provided details regarding data entry, data cleaning, data verification, preparation of different files, format of various tables and use of various statistical techniques for getting the answers to the some basic questions often raised about the school education. The data was analysed to know the

profiles of schools, teachers and students. The achievement of students was analysed to study the differences in achievement among social groups areas, genders within and across the states. Besides, the influence of intervening variables such as school, teacher and home on students' achievement was also analysed.

PROFILES

School Profile

In rural areas pre primary classes were attached with about 27% schools, whereas in urban areas, these were attached with about 28.5% schools. Facilities related to teaching-learning process such as maps were available in approximately 85% schools, children books, globes and charts were available in 77% to 80% schools. Magazines, journals and newspaper were available only in 35% schools. Infrastructural facilities i.e. chairs for teachers, school bell, blackboard, chalk and duster were in 91% to 95%, water pitcher, ladel and glasses were in 72% but musical instruments were available in only 36% schools. Ancillary Facilities namely Computer and TV were available between 8% to 16% separate toilet for girls was in 39%, first-aid-kit and electric connection were in 40%, safe drinking water was available in about 73%, toilet facilities and immunization facilities were available in 55% to 58%, annual medical check-up facilities for students was available in 61% schools. Competency Based Teaching Materials such as text books, teacher's handbook and teaching aids were more available in 2001 as compared with 1998. All incentives schemes were equally availed by both boys and girls. However, mid- day meal and free textbooks were better availed as compared to other incentive schemes. The average number of working days in schools was approximately 213 days. On an average, schools were having 7 periods in a day of approximately of 40 minutes duration. Overall 65% schools had PTAs, followed by 56% VECs, 50% SMCs and 20% AECs.

Teacher Profile

Overall number of female teachers was more than the male teachers. In urban schools female teachers were more than twice than male teachers. However, the trend was reverse in rural schools. The average number of teachers per school in rural and urban areas was approximately 6 and 9 respectively. Average pupil teacher ratio was approximately 39:1. Approximately 1% teachers had qualifications below Class X level. Overall, more than 50% teachers were degree or PG degree holders. The percentage of female teachers holding PG degree and secondary certificate was more than male teachers. The percentage of male teachers who studied Mathematics and Science subjects upto degree level was more than female teachers. But the trend was reverse in case of Language and Social Sciences. Besides, the percentage of male teachers who had studied Mathematics, Language and Science below Class X was less than female teachers. Approximately 67% teacher had diploma/certificate in Primary/Elementary Education and approximately 33% teachers had B.Ed. degree. Very few teachers were having M.Ed degree. Majority of teaching aids were available to more than 85% teachers in schools except flash cards, science kit and mathematics kit. Overall teaching aids were available more to female teachers than male teachers. In-service training was provided by Block Resource Centres, DIET, School Complexes, Cluster Resource Centre and by SCERT. But minimum number of teachers were trained by School Complex. Maximum in-service training programmes were conducted on 'Competency Based Teaching-Learning and it was followed by Content Enrichment, Activity based joyful learning and 'General Training Programmes'. But, minimum programmes were conducted on 'Use of Instructional Material'. Further, approximately

46% training programmes had average effectiveness in terms of utility of knowledge gained during training programmes. However, 37% programmes were rated as 'Highly' useful. The impact of these training programmes was rated as average by 48% to 51% teachers in different subjects. Improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 31% to 35% teachers. Out of total sampled teachers approximately 50% teachers were without any in-service training during last three years (2000-2002). The percentage of male teachers who have not attended any in-service programme was more than female teachers. Teachers both in rural and urban areas were getting maximum assistance from Head of the school and sometimes they were also getting assistance from other sources like DIET etc.

Pupil Profile

The medium of instruction for approximately 80% students in the schools was same as the language spoken at home. About 18% fathers and 39% mothers of the students were illiterate. Only 5% fathers and 2% mothers were having degree or higher educational qualification. Overall educational status of mothers was poorer than fathers. In rural areas majority of mothers were housewives and fathers were farmers. In urban areas also majority of mothers were housewives but fathers were skilled workers. Only few mothers and approximately 5% fathers were Manager/Senior Officers. Overall, girls were getting better academic assistance than boys in both rural and urban areas from all family members. In urban areas girl's mothers were more helpful than elder brother/sister and others. Approximately 90% students were attending school for more than 70% of working days. Only 3-4% boys and girls were attending schools less than 60% of total working days.

STUDENTS ACHIEVEMENT

A cursory glance of the achievement of class V students in EVS, Mathematics and Language showed that the distribution of scores covered the entire range from 0 to 100 percent. However the overall average performance of students in EVS, Mathematics and Language was 50.30%, 46.51% and 58.57% respectively. The number of children who scored in the range (0-10) percent were in EVS (523), in Mathematics (1176) and in Language (250). The maximum number of cases in EVS (16113), in Mathematics (18,123) and in Language (16,489) were in the range 30-40 percent, 30-40 percent and 50-60 percent respectively. The 48.52% students in EVS, 41.26% in Mathematics and 69.75% in Language scored more than 50% marks whereas 34.25% in EVS, 27.69% in Mathematics and 51.07% in Language scored more than 60% marks. Students achievement was better in Language than EVS which in turn was better than in Mathematics.

The average achievement in EVS was 50.30% with standard deviation 20.67. The performance of students across the states varied from 34.93% in Himachal Pradesh to 73.60% in Manipur. There were as many as 17 states/UTs who performed below the national average achievement of 50.30%. Himachal Pradesh, J & K and Goa are the three states who performed below 40% level. The average achievement of 4 states i.e. Arunachal Pradesh, Bihar, Manipur and Tamil Nadu was found to be more than 60%. Eleven states displayed achievement between 50 and 60 percent. The standard deviation varied from 12.01 in Himachal Pradesh to 23.43 in Madhya Pradesh.

The average achievement in Mathematics was 46.51% with standard deviation 21.30. The score of students across the states varied from 30.48% in Goa to 74.46% in Manipur. There were as many as 17 states/UTs whose average was below the national average of 46.51%. The average achievement in 8 states/UTs was even less than 40%. Only 3 states, Manipur, Bihar and West Bengal demonstrated more than 60% achievement.

Four states demonstrated achievement between 50 and 60 percent. The standard deviation varied from 13.49 in Goa to 23.92 in Nagaland.

The average achievement of students in Language was 58.57% with standard deviation 18.30. The performance of students across the states/UTs varied from 44.68% in Goa to 73.39% in Manipur. There were as many as 15 states/UTs who performed below the national average of 58.57%. The average achievement in 12 states was found to be more than 60% and of them 3 demonstrated more than 70% achievement level. The standard deviation varied from 10.38 in Mizoram to 21.91 in Madhya Pradesh.

The level of achievement of students in EVS, Mathematics and Language across the states showed that only Manipur in EVS and Mathematics, and Manipur, Tamil nadu and West Bengal in Language displayed performance above 70% level. Majority of states had average achievement between 40-60% in EVS, 40-50% in Mathematics and 40-60% in Language. Three states in EVS and eight states in Mathematics performed below 40 percent level.

In all the states except in Bihar, Chandigarh, Manipur and West Bengal the achievement in Language was better than EVS followed by Mathematics. In Bihar, achievement in EVS was better than Language followed by Mathematics. In Manipur, achievement in Mathematics was better than EVS and in all three subjects achievement crossed 70% mark. In West Bengal, achievement in Language was better than Mathematics followed by EVS. In Bihar, the achievement of students crossed 60% mark in all the three subjects. The nation wide average achievement in decreasing order was Language (58.57%), EVS (50.30%) and Mathematics (46.51%).

Genderwise and Areawise Achievement

In Environmental Studies, the performance of urban students, both boys and girls was significantly better than their counterparts in rural areas. The achievement of boys was significantly better than girls. In rural areas boys performed significantly better than girls.

In Mathematics, the performance of urban students, both boys and girls was significantly better than their counterparts in rural areas. The achievement of boys was better than girls both in urban and rural areas.

In Language, the achievement of urban students, both boys and girls, was significantly better than the rural students. In rural areas boys performed significantly better than girls whereas in urban areas girls performed better than boys.

In Grammar & Usage component of Language test, the achievement of urban students, was significantly better than the students from rural areas. In rural areas boys performed significantly better than girls. However, in urban areas there was no significant difference in achievement between boys and girls.

In Reading Comprehension component of Language test, the achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In rural areas boys performed significantly better than girls whereas in urban areas girls performed better than boys.

Genderwise and Categorywise Achievement

In Environmental Studies, the achievement of students, both boys and girls of Others category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories. Within categories, boys performed significantly better than girls.

In Mathematics the achievement of students, both boys and girls of Others category was better than their counterparts in SC category followed by ST category and the differences in achievement were significant across the categories except between girls of ST and SC. Within each category, boys performed significantly better than girls.

In Language the achievement of students, both boys and girls of Others category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories. In SC category, boys performed significantly better than girls.

In Grammar & Usage component of Language test the achievement of students, both boys and girls of Others category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories except between boys of ST and SC categories. In SC and ST categories, boys performed significantly better than girls.

In Reading Comprehension component of Language test the achievement of students, both boys and girls, of Others category was better than their counterparts in ST followed by SC category and the differences in achievement were significant across the categories. In SC category, boys performed significantly better than girls.

Areawise and Categorywise Achievement

In Environmental Studies, the achievement of both rural and urban students of Others category was better than their counterparts in ST followed by SC category and differences in achievement were significant across the categories. Within each category, urban students performed significantly better than rural students.

In Mathematics, the achievement of both rural and urban students of Others category was better than students of SC and ST categories and differences in achievement were significant across the categories except between rural ST and rural SC. Within SC and Others categories, urban students performed significantly better than rural students.

In Language, in rural areas, Others performed significantly better than both SC and ST students. In urban areas, ST performed better than Others followed by SC students and the differences in achievement were significant across the categories. Within each category, urban students performed significantly better than rural students.

In Grammar & Usage component of Language test in rural areas, Others performed significantly better than both SC and ST students. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST respectively. Within each category, urban students performed significantly better than rural students.

In Reading Comprehension component of Language test in rural areas, the achievement of Others was better than ST followed by SC students and differences in achievement were significant across the categories. In urban areas, ST performed better than Others followed by SC students and differences in achievement across the categories were significant. Within each category, urban students performed significantly better than rural students.

CONTRIBUTION OF INTERVENING VARIABLES

School Related Variables

Availability of competency based handbook, workbook, textbook, availability of teaching aids, number of working days in a year, community participation, teaching time and physical facilities influence the learning achievement of children in the three subjects. The positive association of availability of competency based workbook, teaching aids, community participation and physical facilities with the three criteria indicates that use of competency based workbook, availability of teaching aids, active participation of community and physical facilities help the children in improving their learning achievement in the three subjects. The contribution of few is significant but at varied

from state to state. Higher pupil teacher ratio has not been adversely affecting achievement in all States/UTs.

Teacher Related Variable

Teaching aids & teaching style of teachers, help and academic from school organization and teachers' qualification influence the learning achievement of children in the three subjects. The positive association of these variables with the three criterions indicates that use of teaching aids and teaching style of teachers, academic help from senior colleagues of school organization and teachers' qualification helped the children in improving their learning achievement in the three subjects

Pupil Related Variable

Availability of Teaching-learning material, good schooling practices and academic assistance provided by family members, percentage attendance of students in school, age of children and educational status and occupation of parents influence the learning achievement of children in the three subjects, EVS, Mathematics and Language. The positive association with availability of teaching learning material, schooling practices and academic assistance provided by family members and percentage attendance of students in school with the three criterions indicates that these help the children in improving their learning achievement in the three subjects through the contribution varies from state to state.

The negative association of age of students, and detention with the criterions indicates that children of higher age score poorly. It is possible that the some children are repeaters, inspite of 'no detention' policy in vogue.


To sum up, some of these variables have contributed significantly in some states otherwise the contribution is there but not appreciable.

CONSTITUTION OF INDIA

Part IV A (Article 51 A)

Fundamental Duties

Fundamental Duties – It shall be the duty of every citizen of India —

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
 - (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
 - (c) to uphold and protect the sovereignty, unity and integrity of India;
 - (d) to defend the country and render national service when called upon to do so;
 - (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
 - (f) to value and preserve the rich heritage of our composite culture;
 - (g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;
 - (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
 - (i) to safeguard public property and to abjure violence;
 - (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
 - (k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.
- 

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Part-I



CONTEXT

The Education is intended to develop basic learning skills, “3 Rs” i.e. reading, writing, arithmetic’s and life skills necessary for the children to survive and improve the quality of life. During childhood developments in the domains of literacy and numeracy take place through acquisition of Basic Learning Competencies (BLC). These competencies represent levels of learning in a particular subject comprising knowledge, understanding, skills, abilities, interests, attitudes and values. The competencies are essentially to be acquired by the end of a particular stage or standard of education. As far as the primary stage is concerned it is in fact the foundation for the development of basic competencies.



The primary education in particular has remained a serious concern of the nation since independence. A large number of programmes and schemes have been initiated both by

the union and state governments to realise the goal of universalisation of primary education. This has led to the opening of a large number of schools with emphasis on universal enrolment and retention, with a focus on quality of education. Curriculum renewal and preparation of good text books have been a continuous process. A large number of teacher training programmes, improvement in infrastructural facilities, upgradation of schools, and recruitment of teachers have been made on account of the recommendations various commissions i.e. University Education Commission (1948), Secondary Education Commission (1952), Kothari Commission (1964-66), National Policy on Education (NPE-1986) and Programme of Action-1992. In the post independent period, a number of state and national institutes like NCERT, NIEPA, SCERTs, SIEs, SIEMATs, DIETs also came into existence as a support system to the expanding school education system. An account of expansion in school education sector over past half a century can be had from the data¹ presented below in table 1.

Table 1: Data Regarding Increase in Schools, Teachers and Students

Classes	1951					2001				
	Schools	Teachers	Students in millions	Female teacher/ 100 male teachers	Pupil Teacher Ratio	Schools	Teachers	Students in Millions	Female teacher/ 100 male	Pupil Teacher Ratio
Primary	2,09,671	5,38,000	19.2	20	24:1	6,38,738	18,96,000	113.8	55	43:1
Upper Primary	1,35,96	86,000	3.1	18	20:1	2,06,269	13,20,000	42.8	62	38:1
Secondary & Sr. Secondary	7,416	1,27,000	1.5	19	21:1	1,26,047	17,61,000	27.6	49	32:1

Due to rise in enrolment, pupil teacher ratio has increased at all stages. The student enrolment increased about 18 times in secondary classes due to various initiatives taken for universalisation of primary education in the past. The ratio of female to male teachers have also increased about three times during the period (1951-2001).

The quantitative expansion seems to have over shadowed the quality of education. Research studies conducted both at national and state levels point out low level of learning in schools and the situation becomes worse as children move to higher classes. Poor level of achievement at primary level is a de-motivating factor resulting in repetition and drop out from the schools.

Quality in education is required to help individuals:- learn to know, to do, to be and to live together. Improving quality of education is one of the six goals in the Dakar 'Framework of Action' endorsed by 184 countries in the world, in April 2000 in Dakar, Senegal. The quality of education in terms of students' learning outcomes can be demonstrated and claimed only through assessment and monitoring.

Though there are a number of factors which determine the quality of education, the most vital one that attracts the attention of one and all is the level of achievement. These levels of achievement for any nation are so important that they need to be known periodically to keep a tab on the general health of the education system. Such a requirement warrants the conduct of periodical achievement surveys at different stages of school

1. Data taken from selected statistics, Govt. of India, MHRD, Department of Secondary and Higher Secondary Education, 2000-01

education in order to initiate remedial measures to improve the quality of education. National Policy on Education 1986, recommended the conduct of periodical achievement surveys at all stages of school education. The surveys provide a large scale data from which the information can be generated for the following purposes:

- To describe the status of the educational system.
- To compare individual units, schools, blocks, districts and state level achievement,
- To serve a criteria for the accountability as a whole.
- To provide feedback to policy makers and education planners to enable them to develop effective instructional strategies.
- To see the effect of school and home environment on achievement.
- To gather large scale data on assessment to provide information to monitor and keep a track record of development of the system over the years with reference to the achievement of nationally agreed learning outcomes.

EARLIER NCERT SURVEYS

NCERT has been conducting periodical school education surveys to collect data regarding availability of schools, teachers, classrooms, infrastructural facilities, students enrolment, retention etc. for planning and assessment of various schemes. But information regarding the quality of learning and attainment levels of children is not available on a large scale. The systematic efforts have not been made in this direction. Very few achievement surveys in a truncated way have been conducted in our country.

Three major surveys were undertaken by NCERT to study the level of achievements of primary school children across states. The first ever All India Achievement Survey in Mathematics was conducted by Kulkarni (1970) at three levels i.e. at the end of primary stage (class IV), at the end of middle school (class VIII) and at the end of secondary school (class X). Common tests translated into 13 languages were administered on a sample of children drawn from 15 states. The number of children who appeared in the tests varied from 28,000 at primary stage to nearly 20,000 at secondary stage. It was found that state average at class IV varied from 26 to 48% which got reduced at middle and secondary stages. There were regional differences within the state also. The direction of differences between urban and rural students varied from state to state. Generally boys performed better than girls barring few exceptions in some states. At the same time, another study was conducted by International Association for Evaluation of Educational Achievement (IAEEA) in mother tongue and science also at three levels i.e. for children of age 10+, 14+ and the last class of secondary schooling. This study was confined to states having Hindi as a medium of instructions. The study revealed that school related variables contributed more than home related variables.

Another study in NCERT was undertaken by Dave and others (1988) on achievement of children in Primary classes I to IV in 22 states/ union territories in the country. Although the objective of the study was to compare the impact of inputs made available under a special project, 'Primary Education Curriculum Renewal (PECR)', the findings of the study were quite relevant as far as the pupil's achievement in schools were concerned. The study focussed on three curricular areas i.e. Language, Mathematics and Environmental Studies I & II. It was found that the achievement declined from Class I to Class IV in all subjects. Large variation in achievement across states was also observed. The variations were noticeable in the states of Bihar, Madhya Pradesh, Orissa, Andhra Pradesh, Rajasthan and Karnataka.

Research studies indicated that the acquisition of basic skills of reading, writing and numeracy in primary school children were very poor in some of the states. The

quantitative expansion of primary education may have led to decline in its quality. Therefore, a third major achievement survey was undertaken at the end of class IV of Primary Schooling by Shukla and other in NCERT in (1990). According to the pupils enrolment data as reported in Fifth All India Education Survey, a sample of 0.7% of total enrolment was planned for the study. This sample varied from state to state (minimum 83 in Arunachal Pradesh to maximum 13,688 students in Uttar Pradesh) with a proportionate representation from rural and urban population. The survey was planned for 1 lakh students from 25 states and UT of Delhi, but the final data was collected from 65,861 students of class IV from 22 states and Delhi. Three states of Himachal Pradesh, Goa and Manipur could not participate and a part of J&K state was also dropped. Tests were administered in 15 languages. It was found that average score in reading comprehension was lower than Mathematics. There was no significant difference in achievement among children from rural and urban areas but in 80% states the difference evenly favoured one or the other group. The performance of children studying in cities was better than those studying in rural areas in most of states. It was also found that teachers' knowledge in the subjects was inadequate. A positive impact of in-service training programmes was also visible in this study. The report was published in 1994.

DISTRICT PRIMARY EDUCATION PROGRAMME (DPEP)

In 1992, Central Advisory Board on Education (CABE) while reviewing the progress made under NPE-86, called for an integrated approach to primary education development at the district level. This resulted in a most intensive effort by Central Government to increase enrolment, retention and attainment in primary education. The project is popularly known as DPEP. The DPEP programme was initiated in 42 most backward districts having low literacy rate across seven states in 1994. To-day, 277 districts spread over 18 states have been covered under DPEP programme. This programme was district specific aimed at enhancing literacy rate and reducing the gender-wise, area-wise and category-wise differences in achievement. A Base-line survey (BAS) was conducted in DPEP districts to have a benchmark for measuring hike in achievement. Subsequently, mid-term achievement surveys (MAS) and terminal achievement surveys (TAS) were conducted in all DPEP districts.

INTERNATIONAL STUDIES

Imparting quality education to children is a challenge before education planners and administrators in major parts of the world even today. This concern was expressed in the World Conference on 'Education for All' held at Jomtein, Thailand in March, 1990. Its article 4 states

Whether or not expanded educational opportunities will translate into meaningful development – for an individual or for society – depends ultimately on whether people actually learn as a result of those opportunities, i.e. whether they incorporate useful knowledge, reasoning ability, skills and values.

The focus of basic education must, therefore, be on actual learning acquisition and outcome, rather than exclusively upon enrolment, continued participation in organized programmes and completion of certification requirements. Active and participatory approaches are particularly valuable in assuring learning acquisition and allowing learners to reach their fullest potential. It is, therefore, necessary to define acceptable levels of learning acquisition for educational programmes and to improve and apply systems of assessing learning achievement.



The recommendations of the conference were a landmark for the promotion of greater access and better quality in basic education worldwide. Consequently, a joint UNESCO-UNICEF project "Monitoring Learning Achievement" (MLA) was launched in 1992 in phased manner in 60 countries. India was not covered under the MLA project. Its objective was to improve the quality and quantity of education offered in an equitable and effective manner besides, promoting 'Monitoring Culture' which will keep the learner at the center of all educational initiatives. This monitoring project had a special and deliberate focus on minimum basic learning competencies (BLCs) in the domains of literacy, numeracy and life skills.

At the same time in 1995, IAEEA conducted third International Mathematics and Science Achievement Survey for grades III-IV, VII-VIII and for final year of secondary schooling. Another important study "Programme of International Students Assessment" (PISA) have been undertaken by Organization for Economic Cooperation and Development (OECD) countries in 2000. The programme is aimed at in knowing the development of general skills in 15+ age group students through education in reading literacy, mathematical literacy and scientific literacy. In the first phase survey in reading literacy has been conducted in 2000 in 28 OECD and four non-OECD countries. The second and third survey had been planned for mathematical literacy and scientific literacy in 2003 and 2006 respectively. These studies are to be repeated after a gap of three years.

THE PRESENT STUDY

With a focus on universalization of primary education, a number of schemes have been implemented by Government of India with the support of International agencies like World Bank, European Commission, UNESCO, etc. A positive impact in enrolment, retention and achievement has been indicated by research studies in selected districts. However no major study on all India basis has been undertaken since 1990. More than a decade has elapsed and a concern has been expressed at the national level for conducting a large scale achievement survey to know the health of our education system. NCERT has also been thinking of institutionalizing periodic achievement surveys. Therefore this survey was planned with the following objectives.

- To study the level of achievement of children in Language, Mathematics and Environmental Studies at the end of Class V.
- To study the differences in achievement, categorywise, areawise and genderwise.
- To study the influence of intervening variables like home, school and teacher on students achievement.

This survey was initiated in August 2000 as a NCERT approved project. Earlier surveys were confined to one or two subject areas but this was planned to cover all the three main curricular areas i.e. Language, Mathematics and Environmental Studies (EVS) of class V. Besides it was also aimed to cover all states and UTs with their fullest participation at all levels. The terminal stage of primary education is class IV in 14 states and class V in 17 States/UT. With the focus on universalization of elementary education and avoiding the complexity of conducting survey for both classes it was decided to undertake the survey at the end of Class V only irrespective of the education pattern in the state/UT. The terminal stage and medium of instruction in class V are given in Appendix 1.

Realizing the positive impact of DPEP, the Government of India, launched a nation-wide programme 'Sarva Shiksha Abhiyan' (SSA) for universalisation of elementary education in the year 2001. This ambitious programme aims at enrolling all children in the age group 6-14 in schools by 2003 and ensuring their retention and completion of class VII by 2010. The nation-wide achievement surveys initiated by NCERT at the end of classes III, V and terminal stage of elementary education, class VII or VIII depending upon

the pattern of the education system in a state are going to be the base-line studies for planning interventions and measuring the improvement in achievement under SSA programme.

ROLE OF STATES/UTs IN THE PRESENT STUDY

It was decided to associate academic persons from State Council of Educational Research and Training (SCERTs) or State Institutes of Education (SIEs) as State Coordinators for sharing the responsibility of survey within the state. In few states, state coordinators were from other state agencies like Boards of School Education or Directorates of Education etc. State Coordinators participated in almost all activities from inception i.e. development of tools, tryout and validation of tools, sampling of districts, rural blocks, urban areas, schools and within schools teachers and students. Identification of district coordinators, field investigators and their training for collection of data was the responsibility of state coordinators. State coordinators were given a four day orientation at NCERT, New Delhi. Further training to district coordinators was imparted by state coordinators. Like-wise field investigators were given orientation by district coordinators before the actual administration of tools.

The participation at different levels is schematically presented below:

Project Team (NCERT)



State Coordinators (One for each state/UT)



District Coordinators (One for each district)



Field Investigators (Twenty for each district)

The participation of states/UTs has also helped NCERT in building the capacity of state personnel in this area.

ORGANISATION OF THE REPORT

This report comprises of three parts. The first part explains the need of the survey, the process of development of tools, the sampling procedure, analysis plan and administration of tools. The second part deals with the outcome of analysis and its interpretation at the national level. The last part focuses on the state reports for necessary action at their ends. The details of tools used, names of participating states and state coordinators etc. are given in the appendices at the end.

2

DEVELOPMENT OF TOOLS

Assessment of levels of learning of students is one of the major concerns in school education, in the context of quality. The learning can be captured by employing different kinds of tools and techniques. For assessing a large number of students, standardised achievement tests are commonly used. A standardized achievement test has a fixed set of test items designed to measure clearly well defined domain with specific direction for administering and scoring tests. Standard content and procedure make it possible to give the same test/identical test to individuals in different places at different times. For development of achievements tests following steps were undertaken.

IDENTIFICATION OF COMMON COMPETENCIES

Syllabi from different states and UTs were collected. A detailed analysis was undertaken and competencies/concepts common across most of states and UTs were identified in three main curricular areas of class V i.e. Environmental studies, Mathematics and Language. It was found that variations in Mathematics syllabi across states/UTs were minimum as compared to Environmental Studies. In EVS the variations were found in the states of Gujarat, Karnataka, Tamil Nadu, West Bengal, Punjab, Orissa and Kerala.

DESIGNS OF ACHIEVEMENT TESTS

On the basis of content analysis, designs for different subjects covering common competencies/concepts were prepared. Weightages to different aspects were given in these tests. The designs of three subjects are presented below. Two types of questions are there. The multiple choice type objective questions are of one mark while the short answer type are of two marks. In Language, one long answer of six marks is also there.

Design of Language Tests

Weightage to Different Content Areas

Area	No. of Qs.	Weightage Percent
Language Elements	20	46.51
Comprehension	20	46.51
Expression	3	6.98

Weightage of Objectives

Objectives	Knowledge	Comprehension	Expression	Total
Marks	20	20	10	50
Percentage of Marks	40	40	20	100

Weightage to Form of Questions

Forms of Questions	E	SA	VSA	O	Total
No. of Questions	1	2	-	40	43
Marks Allotted	6(1)*	4(2)*	-	40	50

**The number in brackets indicate the number of questions and the number outside total marks for questions*

Design of Mathematics Tests

After detailed discussion, following design of Mathematics test was evolved.

Weightage to Objectives

Objectives	K	U	A	Total
Marks	25	15	10	50
Percentage of Marks	50	30	20	100

Weightage to Form of Questions

Forms of Questions	E	SA	VSA	O	Total
No. of Questions	-	5	-	40	45
Marks Allotted	-	10(5)	-	40(40)	50(45)

Design of Environmental Studies Tests

The design is given in following table

Weightage to Objectives

Objectives	K	U	A	Total
Marks	25	15	10	50
Percentage of Marks	50	30	20	100

Weightage to Forms of Questions

Forms of Questions	E	SA	VSA	O	Total
No. of Questions	-	5	-	40	45
Marks Allotted	-	10(5)	-	40(40)	50(45)

DEVELOPMENT OF TOOLS

Achievement Tests

Three parallel achievement tests based on common competencies/concepts in Environmental Studies (EVS), Mathematics and Language in both Hindi and English medium were developed in the department. Each test contained 40 objective type items with four alternatives. Besides this, there were 5 short answer, supply type questions of 2 marks each in EVS and Mathematics for which students were supposed to write answers. However, the Language tests comprised of two main components i.e. Usage & Grammar and Reading Comprehension. Usage & Grammar contained 20 objective type test items with either two or four alternatives. In Reading Comprehension there were five questions on identification of signs and hoarding and three comprehension paragraphs each having five objective type questions with four alternative. Besides this, there were 2 short answers of 2 marks each and one long answer question of six marks. The basic idea of including short answer and long answer type questions was to test abilities like organization, presentation, expression, writing skill etc. for which objective type questions are often criticized.

A five-day workshop of experts from Hindi speaking states and states having English as medium of instruction for class V was organised. In this workshop these tests were further discussed, improved and refined, so as to make them acceptable across most of states and UTs. Subsequently, two more workshops of state coordinators and experts were held to discuss, generate and translate the tests in remaining Indian languages. In the Language tests, the first 20 items of grammar & usage part were generated in the context of local languages but based on same or similar competencies/concept as planned in the design of Language test. Five questions on identification of signs and hoardings and fifteen questions based on three comprehension passages were simply translated into regional languages so as to maintain uniformity and comparability across states/UTs. In EVS some test items were changed for some states but the competencies/concept remained same or similar. In Mathematics, it was almost translation in regional languages barring very few items. The three parallel tests were developed in this way in each subject.

Development of Questionnaires

For studying the effect of other variables affecting the achievement of children, three questionnaires, one each for the school, teacher and student were developed. These were based on DPEP questionnaires but simplified to a great extent from utility and feasibility point of view. The school questionnaire mainly focused on facilities available in the school, strength of teachers and students and various schemes in vogue in the schools. Teacher questionnaire focused on teacher's qualification, experience, training etc. Pupil questionnaire collected detailed information about his/her home background, parent's qualification, income, profession, sibling in the family etc.

TRYOUT AND VALIDATION OF TOOLS

Three parallel tests in each subject containing 40 objective items of one mark each and five short answer questions in EVS and Mathematics of two marks each and 43 questions in Language were tried out in 21 states and UT of Chandigarh. From each of these states/UT, 15 schools were randomly selected such that the sample had 5 schools from urban areas, 5 from rural areas and remaining 5 schools were from semi-urban areas of one district. This was done so that tests were tried out over children of varying abilities.

from all types of schools. About 20 students from each school were selected randomly so that the sample for each state/UT was of 300 students. Each student was administered one Language test, one Mathematics test and one EVS test out of three parallel tests in each subject.

The sample proposed and actual data collected from tried out states and UT was as follows:

Table 2: Students Sample for the Tryout of Tests

Subject	Test Form	Number of Candidates	
		Proposed	Actually Examined
Language	I	2200	1755
	II	2200	1740
	III	2200	1630
Mathematics	I	2200	1716
	II	2200	1744
	III	2200	1563
EVS	I	2200	1724
	II	2200	1765
	III	2200	1640

This data was processed and different item were analysed for different parameters. On the basis of these parameters, items having facility value between 40 and 80 and discrimination index between 0.3 and 0.8 were selected for preparing the final tests. The co-efficient of reliability of tests was also taken into consideration while selecting two tests out of three tests.

The descriptive questions were scored manually and analysed. In very few states students scored more than 3 out of 10 marks. The percentage of students scoring zero mark was quite high in most of states. The possibility is that the comprehension and writing skills of students were very poor. In view of the poor outcome and poor examiner reliability, it was decided to drop these descriptive questions from the final tests. Thus the final two tests in each curricular area contained only 40 multiple choice objective type questions with four alternative except usage and grammar part of Language Test which had two alternatives as well.

Three questionnaires one each for school, teacher and pupil were also tried out in schools of Delhi and Haryana States for validation. On the basis of feedback, these were revised and were made specific, clear and simpler. These were translated into various regional languages.

COMPETENCIES/CONCEPTS TESTED

Environmental Studies

Environmental Studies (EVS) is an integrated subject covering both science and social science aspects. The focus in this area is on developing awareness about the environment, its protection, developing habits, attitudes and skills in the child for being a healthy and active member of the community. This curricular area takes into its fold the natural, man made, social and cultural environment. In EVS most of the test items were based on

concepts related to daily life activities, environment, health, hygiene, food functions and powers of different organs of democracy etc. Details of competencies/concepts tested are given below:

Table 3: Competencies/Concepts tested in EVS

Competencies/Concept	Question No	Competencies/Concept	Question No
Identification of a state on the map	1	Identification of a leader of freedom struggle	20
Identification of natural features of the country	2	Knowledge of Solar system, Planets etc.	21
Climatic conditions at varying altitudes	3	Understanding of phenomenon of eclipse	22
Identification of boundaries with neighbouring countries	4	Knowledge of composition of air	23, 24
Location of state	5	Knowledge of pollution free fuel	26
Understanding of longitude and latitude	6	Knowledge of soil erosion	27
Identification of poles	7	Effects of deforestation	28
Term of a legislature	8	Effects of weather conditions on human bodies	25
Representative of a President in a state	9	Knowledge of health workers	33
Judicial functions of courts	10	Understanding of deficiency diseases	34
Recognition of first President of India	11, 20	Knowledge of different parts of human body	36
System of governance in India	12	Safety measures necessary during cooking	39
Eligibility conditions for being a voter	13	Knowledge of carrier of diseases	40
Gandhiji's strategy for freedom struggle	14	Use of simple machine	29
Knowledge of postal services	15	Concept of flotation	30
Knowledge of important United Nations days	16	Effects of a force	31
Problem of over population	17	Understanding of gravitation at force	32
Farmer's role in freedom struggle	19	Knowledge of plants in deserts	35
Knowledge of pre- British Rule	18	Knowledge of function of fins of a fish	37
		Conservation of wild animals	38

In spite of preparing items on common competencies some items were found non-functional in some states. Comparable test items based on same/similar competencies and of same difficulty level were substituted in the test of that state. In final test of EVS the following items were replaced.

State	Question Number in the Test
West Bengal	28
Gujarat	15 and 19
Karnataka	8,9,11,12,18 and 19
Meghalaya	15 and 19
Orissa	6,16,18,19,20 and 24
Punjab	15 and 16
Tamil Nadu	4,5,10,16,18,19,23,24,28,34,36,37 & 39

Mathematics

The Mathematics test contained test items based largely on the common competencies. The curriculum variations across the states were minimum. The test items broadly covered number system, four fundamental operations, problems involving, HCF, LCM, decimals, fractions, percentage and its simple applications, sale-purchase, average, mensuration, and problems on geometrical figures etc. The question-wise details of concepts tested are given below:

Table 4: Competencies/Concepts tested in Mathematics

UNITS	Concept	Q. NO.	UNITS	Concept	Q. NO.
I	Number System		III	Fraction	
	Number name	1		Conversion to lowest term	24
	Place value	2		Descending order	23
	Ascending order	3		Division of fractions	27
	Ordering of numbers,	4*		Simplification of fractions	25
	Use of ordering symbols	5		Word Problems on fractions	26
	<, =, >			Subtraction of fractions	36
	Rounding of Numbers	37	IV	Decimals	
	Addition of five digit numbers	8			28
	Subtraction of five digit numbers	9		Word Problem on subtraction	
	Multiplication of three digit numbers	10		Word Problem on Multiplication	30
	Division by two digit numbers	11			19
	BODMAS	35		Word Problem on Addition	
	Word Problems on Multiplication	12, 20		Conversion from percent to fraction	32
	Calculation of HCF	6	V	Measurement/ Area	
	Calculation of LCM	7			29
II	Commercial Mathematics			Conversion from one unit to other for measuring volume	
	Unitary Method	13		Time Calculation	22
	Averages	14,15		Area of Rectangle	21
	Profit & Loss	16		Area of Square	39
		18	VI	Geometry	
	Simple Interest				
		33		Triangle according to angles	17
	Percent			Triangle according to sides	38*
	Word Problem on Percentage	34		Circle's-radius-diameter concept	40

* Q. No. 4 and 38 were deleted from the analysis as these were found defective.

The details of replaced items are given below:

State	Question Number replaced
Gujarat	14
Karnataka	23
Kerala	14,15,32,34 and 37
Orissa	14 and 15

Languages

The Language test contained 40 items of one mark each. It had two parts. The first part contained 20 items testing usage and grammar. A number of competencies testing grammatical structures, use of appropriate vocabulary, use of correct spelling and recognition of errors etc. were tested through these items this portion of the test has been generated in different languages keeping in view the structures of original language taught in the state. It was ensured that the generated items had same difficulty level but the structure and vocabulary used were based on the regional language.

The second part of the test focused on the reading ability of the students. It contained three different activities. The first activity was based on the comprehension of different signs and hoardings that children come across at different places. In the second reading activity, a school time table has been given and the children have to interpret it. This particular reading task is very much relevant to daily school life. Then there are two unseen passages which were not only interesting from students point of view but also value oriented. The questions on these texts were set to evaluate the students ability to locate informations, grasp ideas and the theme of the passage, identify relationships between ideas, events, characters etc. and to interpret ideas and events. This part of the test was translated in different languages and so as to keep the content of the reading texts same. This was also necessary to have comparability of test. The details are given below in the table:

Table 5: Competencies/areas tested in Language

Unit	Competency/ Area	Q.No.
I	Vocabulary	4,5,10,19,20
II	Structure	1,2,3,9,11,12,13,14,15,16,17,18
III	Spelling	6,7,8
IV	Reading Comprehension	
	Comprehension of Instructions	21 to 25
	Comprehension of Time Table	26 to 30
	Comprehension of Informative Passage	31 to 35
	Comprehension of Story	36 to 40

PRINTING OF FINAL TOOLS

Two sets of tests in Language, Mathematics and EVS were finalised. One of them in each subject was printed by NCERT at New Delhi in 17 languages along with school, teacher and pupil questionnaires. Sufficient copies of the printed material according to the states requirement was sent to state coordinators for administration. These tools were administered in 27 states and 3 Union Territories as given in *Appendix 1*.

3

SAMPLING DESIGN AND ADMINISTRATION OF TOOLS

SAMPLING DESIGN

Multistage stratified random sampling design was used for the selection of districts, blocks, urban areas, schools, teachers and pupils from each State and Union Territories of the country.

Selection of Districts

The total number of districts in states varied from 1 in Goa to 70 in Uttar Pradesh. It was planned to select 10% districts from each state. In many northern and north eastern states only one or two districts could have been selected on this criteria. Study confined to one or two districts would not have provided the true picture of the state. Therefore, after discussion it was decided to have a minimum of 4 districts from each state except Goa. For this, each state was divided into four or more geographical or socio-cultural regions depending upon the number of districts to be selected. All districts of a region were arranged in an alphabetical order and randomly one district from each region was selected. Wherever possible, one tribal district was included among the selected districts. Also in view of the relatively composite composition of student population in the state capital, the district in which state capital was located was also included in the sample. Goa state had only two districts and one district was selected. In case of UTs, the entire UT was treated as one district. Hence, areas were clubbed together for the selection of urban areas and rural blocks in the UT. Finally, 116 districts were selected for the survey. A list of selected districts from each state and UT is provided in the Appendix 2.

Selection of Rural Blocks and Urban Areas

The rural blocks and the urban areas, were separated in each selected district. If the total number of blocks in a district was upto four then all blocks were taken. If the total number of blocks was more than four, two separate lists of tribal and non-tribal rural blocks were prepared in an alphabetical order and proportionately four blocks were selected randomly. A minimum of one tribal block was included in the sample if it was there in a district. Similarly, all the urban areas in a district were arranged alphabetically and randomly three urban areas were selected if the total number of urban areas were more than three. If the number of urban areas were three or less than three then all areas were included in the sample.

Selection of Schools

It was proposed to select 50 Government and Government aided schools from each district proportionately from four rural blocks and three urban areas using random tables. Lists of government and government aided schools (all primary, middle, secondary and sr. secondary schools) having class V were prepared block-wise and urban area-wise. Using random tables 50 schools in proportion to total number of schools in sampled blocks and urban areas were selected from each district. A minimum of 10 schools from urban areas were necessarily included in the survey for better representation. In addition to this, a replacement list of 10 schools in the proportion of rural and urban number of sampled schools was also prepared for meeting out any exigencies.

Selection of Teachers

A maximum of three teachers including Head teacher who taught Language, Mathematics and EVS to class V sampled students were selected for filling in the teacher's questionnaire.

Selection of Students

A maximum of 30 students and minimum of five students were selected from each sampled school. If the number of sections were more than one then randomly one section was selected. All the students of this section were selected if the number of students were 30 or less than 30. In case the number of students was more than 30, then the names of boys and girls were alternately listed using the class register and 30 students were finally selected using a random start.

From the selected 116 districts, estimating the participation of an average 45 schools from each district, 2 teachers and 20 student from each school, the study sample was expected to cover about 5000 schools, 11,000 teachers and 1,05,000 students.

Actual Sample of Schools, Teachers and Students

The participation of all states and UTs was planned in this survey. But out of 35 states/UTs, Jharkhand state and three UTs i.e. Lakshadweep, Dadar and Nagar Haveli and Daman and Diu could not participate. Meghalaya state participated in the survey but could not be included in this report as the data received was incomplete and of very few schools. Therefore, students, teachers and schools from remaining 27 states and 3 UTs formed the target population for this survey. The actual sample of schools, teachers and pupils for this study is as follow:

Schools

A total data of 4787 schools from 105 districts of 30 States/UTs of the country could be used for analysis. The area-wise and management-wise distribution of sampled schools is presented in table 6.

Table 6. Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	3545	2565	72.36	518	14.61	462	13.03
Urban	1242	757	60.95	85	6.84	400	32.21
Total	4787	3322	69.4	603	12.6	862	18.01

Out of total sampled schools, 74% schools were from rural areas and remaining 26% schools were from urban areas. Further, average number of schools per district in the sample is approximately 43.

Teachers

A total 10796 teachers were sampled from 4787 schools. The distribution of selected teachers is given in table 7.

Table 7: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	704	13.48	835	15.99	1337	25.6	2346	44.93	5222
	Female	242	8.93	296	10.92	548	20.21	1625	59.94	2711
	Total	946	11.92	1131	14.26	1885	23.76	3971	50.06	7933
Urban	Male	101	10.08	245	24.45	232	23.15	424	42.32	1002
	Female	144	7.74	168	9.03	308	16.55	1241	66.68	1861
	Total	245	8.56	413	14.43	540	18.86	1665	58.16	2863
Total	Male	805	12.93	1080	17.35	1569	25.21	2770	44.51	6224
	Female	386	8.44	464	10.15	856	18.72	2866	62.69	4572
	Total	1191	11.03	1544	14.3	2425	22.46	5636	52.2	10796

On an average two teachers per school were interviewed. However, the average for teachers in urban schools was higher than teachers in rural schools. Further in the sample the male and female teachers were approximately 58% and 42% respectively. Area wise the percentage of teachers in rural and urban schools was approximately 73% and 27% respectively. About 11.03% teachers belonged to scheduled caste category, 14.3% to scheduled tribe category, 22.46% to other backward category and remaining 52.2% teachers were of others category. The percentage of female teachers was higher than male teachers in case of others category only.

Students

The data of 88271 students who appeared in all the three tests was analysed. Table 8 gives the account of the students genderwise and areawise.

Table 8: Distribution of Sampled Students

Area	Number of Class V Students		
	Boys	Girls	Total
Rural	32097	29525	61622
Urban	13039	13610	26649
Total	45136	43135	88271

This sample contained 69.81% students from rural areas and remaining 30.19% students from urban areas. In the total sample, 51.13% were boys and 48.87% were girl students.

ADMINISTRATION OF TOOLS

A four day orientation programme for the conduct of achievement survey was organized for state coordinators at NCERT, New Delhi. Subsequently, state coordinators, organized a 2-day orientation programme for the district coordinators in their respective states to explain the procedure of the administration of tools and collection of data. The tentative schedule for the conduct of survey in different states/UTs was planned centrally for the months of Feb-March, 2002. The actual achievement survey was conducted in different states/UTs on different dates in the month of March - April, 2002.

For actual conduct of achievement survey in the selected schools in sampled districts, state coordinators were requested to identify district coordinators for each district to carry out the field activities in a responsible and systematic way. Further, each district coordinator appointed 20 field investigators for administration of tests and questionnaires in the schools. The role of field investigators was most crucial as they were to collect actual data from schools. Therefore, it was decided to appoint unemployed trained/untrained graduates capable of carrying out this task sincerely and efficiently. A reasonable honorarium for actual working days was given to them. In some districts, students of District Institute of Education and Training (DIET) were engaged in this field activity. One week prior to the actual field work district coordinators, organized a training programme for the field investigators and worked out details regarding actual schedule of visits to the schools.

A team of two field investigators visited a school under the supervision of district coordinator and completed the task within two-days in one school. Each of the 10 teams so constituted were assigned 5 schools. Thus for each team, collection of data on an average took two to three week's time simultaneously in all district of a state.

The responses given by children on question cum answer booklets were transferred on the response sheets by the field investigators and scrutinised by the district coordinator. The following materials were used by the field investigators during the field activities.

- Tests in EVS, Mathematics and Language
- Questionnaires for school, teacher and student
- Response sheets
- Field notes

This material was collected back by the district coordinator. These were checked on the sample basis by the district coordinator and corrected for any mistake. The response sheets of tests, three questionnaires and field notes were sent to state coordinator who in turn sent these to NCERT for analysis.

4

PLAN OF DATA ANALYSIS

Keeping in focus the objectives of the achievement survey a detailed 'Framework for Analysis of Data' was developed in the department. This framework provided details regarding data entry, data cleaning, data verification, preparation of different files, format of various tables and use of various statistical techniques for getting the answer to the some basic questions often raised about the school education. Analysis was divided into the following heading and sub headings:

DEVELOPMENT OF PROFILES

The profiles of students, teachers and schools were developed. The briefs discussed under profile of students, teachers and schools are as under:

School Profile

The data collected through school questionnaire regarding distribution of schools on the basis of their terminal stage, attachment of pre-primary schools with sampled schools, availability of physical facilities related to teaching-learning process, competency based teaching-learning material, various kinds of incentive schemes, infrastructural and other ancillary facilities in the schools were analysed. The information regarding total instructional time, number of working days and involvement of various school educational committees were also collected and presented for each state/U.T.

Teacher Profile

In this section teachers responses obtained through the teacher questionnaire in the sampled schools were analysed with reference to their educational qualification, subjectwise qualification and professional qualification, teaching experience, availability of teaching aids, in service training programmes attended by them and the themes covered during the inservice training programme. The effectiveness of various training programmes in terms of utility of the knowledge gained and the improvement in teaching skills were studied. The sources from where teachers received academic assistance were also analysed.

Student Profile

For the development of students profiles, the relevant data were analysed in the light of medium of instructions in which they were studying and the language being spoken at home, regularity in the schools, educational status of parents, occupation of parents, academic assistance provided by the family members after school hours.

These profiles are presented both for the states and for the nation at appropriate places in the report.

ACHIEVEMENT OF STUDENTS

Knowing the level of achievements of students in school subjects, across areas genders and categories is a matter of interest of one and all. For this achievement tests in EVS, Mathematics and Language were administered to students in sampled schools in States/UTs. The mean achievement and standard deviation were computed. For knowing the difference within the groups and between the groups of students the values of critical ratios (CR) were computed. All these computed values are presented in the tabular form in the report. The achievements are also presented through graphs for comparison within subjects, areas, genders, categories in a state as well as across the states.

IMPACT OF INTERVENING VARIABLES ON ACHIEVEMENT OF STUDENTS

It is a well known fact that both school and home environment significantly contribute to the student's achievement. This was studied using statistical technique called multiple regression. Various input variables like physical facilities provided in the school and home, teaching-learning processes adopted by teachers in school were regressed against the student's achievement (referred as three criterion variables) i.e. EVS, Mathematics and Language. The achievement in the three subjects is considered as output and is the result of input provided by other variables. For this some of the similar variables were combined to give its impact on the student's achievement. These combined variables have been referred as composite indices. The process in detail is given below:

Creation of Composite Index

In some cases, simply the values of responses were added to obtain the index. In other cases, the first vector of Principal Component Analysis has been used to derive weights of various sub-variables of a variable. The weights so obtained through the analysis were multiplied with the values of the sub-variables to get the one composite index of the variable.

School Questionnaire

The following variables were included in the regression analysis to see their influence on average achievement of students in school on each of the criterions.

S.No.	Variable	Variable Name
1.	Pupil-teacher ratio	PTR
2.	Number of working days in a year	Working days
3.	Teaching time	Instructional Time
4.	Index of teaching aids includes item numbers (11.01 to 11.09, 11.15 and 11.17)	T-Aid
5.	Index of physical facilities item (11.10 to 11.19 except 11.15 and 11.17)	Physical facility
6.	Index of ancillary facilities item number (11.20 to 11.29)	Ancillary facility
7.	Index of community participation includes (item 14 to 17)	Com_Participation
8.	Indices of availability of competency based teaching-learning material- (item 13)	Comp. TLM

Teacher Questionnaire

The following indices were created using first vector of principal component analysis.

- (i) Index of educational qualification of teacher includes
 - Highest educational qualification
 - Teacher studied mathematics upto
 - Teacher studied language upto
 - Teacher studied environmental science upto
 - Professional qualification
- (ii) Index of teaching experience and teacher's training includes
 - Total teaching experience of primary classes (in years)
 - Employment status in school
 - In-service training (number of days)
 - Knowledge gained through the training programmes
 - Impact of training programmes
 - Number of subjects taught
- (iii) Index of teaching aids and teaching style includes
 - Extent of use of teaching facilities i.e., teacher's guides, dictionary, books other than textbooks, maps, globe, charts, flash cards, science kit, mathematics kit, etc.
 - Giving homework to children
 - Quantity of home work in language, mathematics and EVS
 - Maintenance of teacher's diary.
- (iv) Index of school organisation

Multiple regression analysis was used to find the influence of the following indices on the average achievement of students in a school in each test.

S.No.	Variable	Variable Name
i)	Index of teacher's educational qualification (Item 3 & 8)	QU
ii)	Index of teaching aids and teacher's teaching style (Item 9 & 14)	Te-Aid
iii)	Index of teaching experience and teacher's training (Item 15 & 18)	Ex
iv)	Index of school organization (Item 19.1 & 19.6)	Org

* Derived by adding the six values of recoded item-19

Entry type multiple regression technique was used to identify the contribution of each variable towards the criterion.

Regression (unstandardised) and correlation coefficients of predictors of each of criterions i.e. EVS, Mathematics and Language are given in a tabular form for each questionnaire separately. The level of significance is indicated by * for 5% level and ** for 1% level. In the last row of the table, value of squared multiple correlation coefficient for all the variables included in the regression line has been given. This value multiplied by 100 also explains percentage variance contribution of independent variables together towards criterion.

Pupil Questionnaire

The following indices were created for the pupil questionnaire to include the variables in multiple regression.

- (i) Index of Educational Status and Occupations of Parents
 - Educational Status of Father, Mother
 - Occupation of Father, Mother

- (ii) Index of schooling and related activities
 - Help from family members in studies
 - Taking of private tuitions
- (iii) Index of Teaching-Learning Process
 - Does your teacher come to class?
 - What happens when the teacher is absent?
 - Does your teacher give you dictation?
 - Does your teacher give arithmetic problems to solve in the class?
 - Does your teacher give homework related to Environment Studies?
 - Is the class work assigned to you being checked?
 - Who checks your class work?
 - Do you receive help when you face difficulty in doing the class work?
 - How often are you given tests?
 - Does the teacher tell you about your performance in the tests?
 - Does your teacher give you homework?
 - Do you read newspapers/magazines?

Details of items included in each index and in multiple regression are given below. The abbreviated names used in the regression analysis are given against each variable. Readers are requested to refer these variable names for interpreting the tables.

CLASSIFICATION OF ITEMS PARAMETERS

Achievement tests were important tools for measuring learning. All the three tests were analysed to know the parameters such as facility value (FV), discrimination index (DI) and reliability of the tests. Test items were classified into groups according to ranges of item parameters.

S.No.	Variable	Variable Name
1.	Index of Educational and Occupational Status of Parents (Items 7 & 8)	Ed & Occou.
2.	Index of School Practices and Academic Assistance (Items 11 & 12)	Schooling
3.	Index of Teaching -Learning Process (Items 13 to 25 except 14)	TLP
4.	Percentage of Attendance of the Children in a Academic year (Item 26)	Attendance
5.	Age of Children	Age
6.	Detention of children in school (Item 9)	Detention

IDENTIFICATION OF HARD SPOTS OF LEARNING

On the basis of item analysis, the competencies/concepts where students performance was poor were identified. This will help states/UTs to take necessary steps for improving teaching-learning process.

COMPARISON BETWEEN IN DPEP vs. NON DPEP DISTRICTS

In this study some of the sampled districts in some states were provided inputs under DPEP scheme. To see the difference in performances, the districts in a state were classified in two groups i.e. DPEP and non DPEP. Mean achievement of the students of two groups of districts was computed in all the three subjects. A comparison of students achievement has been made.



Part-II

ANALYSIS AND INTERPRETATION (ALL INDIA)

The information gathered through various questionnaires for the nation is presented in this section. There are sub sections dealing with profiles of schools, teachers and students, students achievement and its comparisons across states. The factors influencing achievements have also been identified. Test items have been classified according to their characteristics.

PROFILES OF SCHOOLS, TEACHERS AND PUPILS

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in table 9.

Table 9: Distribution of Schools on the basis of their terminal stage

Area	Pre- primary classes Attached		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	942	26.57	1902	53.65	1077	30.38	404	11.4
Urban	354	28.5	584	47.02	361	29.07	140	11.27
Total	1296	27.07	2486	51.93	1438	30.04	544	11.36

It is evident that out of 3545 rural schools, pre primary classes were attached with only 942 (about 27%) schools whereas in urban areas, out of 1242 schools, it was attached with 354 (about 28.5%) schools. Further, approximately 54% schools in rural areas and 47% schools in urban areas were only primary schools. The percentage of elementary schools was approximately 30% and 29% respectively for rural and urban areas. Schools having secondary classes were 11% both from rural as well as urban areas. However, the percentage of Sr. Secondary schools was still smaller about 5% and 13% from rural and urban areas respectively.

Facilities related to teaching-learning process

It was observed that maps were available in approximately 85% schools, children book, globes and charts were available in 77% to 80% schools. Magazines, journals and newspaper were available in only 35% schools. Mini tool kit was available in 41% schools. Further, primary science kit, play material and toys, maths kit, reference books, dictionaries encyclopaedia and game equipment were available in approximately 61% to 66% schools.

Infrastructural facilities

It was observed that chairs for teachers, school bell, blackboard, chalk and duster were available in 91% to 95% schools, whereas, tables for teachers were available in 85% schools. Water pitcher, ladel and glasses were available in 72% schools. Further, play ground for students was available in approximately 63% schools. Besides, pin up boards/ notice board and dustbin were available in only 55% to 59% schools. However, musical instrument was available in only 36% schools.

Ancillary Facilities

Computer and TV were available between 8% to 16% schools. Facility for separate toilet for girls was available in 39% schools. First-aid-kit and electric connection were available in 40% schools. However, safe drinking water facility was available in about 73% schools. Toilet facilities and immunization facilities were available in 55% to 58% schools. Besides, annual medical check-up facilities for students was available in 61% schools.

Competency Based Teaching Materials

Information gathered shows that out of 4787 schools, competency based text books were available in 1643 to 1823 schools for classes I to V in the year 2001, as compared to 50 to 213 schools in the year 1998. Work books were available in 698 to 812 schools in the year 2001 as compared with 31 to 53 schools in the year 1998 for classes I to III and V. The picture in class IV was some what different wherein work books were available in 169 schools in the year 1998. The teachers' handbooks were available in 961 to 1063 schools in the year 2001 but these were available only in 30 to 87 schools in the year 1998 for classes I to III and V. However, for Class IV this number was 192 in the year 1998. Teaching aids were available in 1009 to 1215 schools in 2001, against 75 to 136 schools in 1998 for classes I to III and V. However, teaching aids were available in 184 schools for Class IV in the year 1998.

Incentive Scheme

The Table 10 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 10: Number of Children Receiving Facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	89822	83731	31005	28782	109590	105450	101634	110836	332051	328799
	%	35.81	32.03	35	33.67	42.03	40.64	41.21	40.2	39.21	37.28
Free uniform	N	30709	38020	10032	10935	38760	38789	37971	48620	117472	136364
	%	12.24	14.54	11.33	12.79	14.87	14.95	15.39	17.64	13.87	15.46
Free textbooks	N	92009	88727	31702	28357	86166	88269	82843	90623	292720	295976
	%	36.68	33.94	35.79	33.18	33.05	34.02	33.59	32.87	34.57	33.56
Scholarship for regular attendance	N	18414	31609	9307	10744	13674	14314	8298	9994	49693	66661
	%	7.34	12.09	10.51	12.57	5.24	5.52	3.36	3.63	5.87	7.56
Other Schemes	N	19882	19324	6533	6657	12550	12625	15908	15615	54873	54221
	%	7.93	7.39	7.38	7.79	4.81	4.87	6.45	5.66	6.48	6.15

Mid-day meal and free textbooks were better availed by both boys and girls of all categories as compared to other schemes. All incentives were equally availed by both boys and girls.

Instructional Time

Average instructional time in all the sampled states/UTs has been presented in table 11 below:

Table 11: Statewise Average Instructional Time

S.No	State	Number of working days	Number of Periods per day	Duration of a period in minutes
1	Andhra Pradesh	217	7	45
2	Arunachal Pradesh	178	7	40
3	Assam	198	7	41
4	Bihar	212	7	43
5	Chhatisgarh	223	6	40
6	Delhi	204	7	35
7	Goa	215	8	36
8	Gujrat	219	7	36
9	Haryana	219	4	41
10	Himachal Pradesh	226	9	35
11	Jammu & Kashmir	203	7	41
12	Karnatak	218	8	40
13	Kerala	186	7	43
14	Madhya Pradesh	221	6	43
15	Maharastra	222	8	36
16	Manipur	209	7	43
17	Mizoram	196	7	41
18	Nagaland	184	7	39
19	Orissa	225	7	42
20	Punjab	207	6	38
21	Rajasthan	225	8	38
22	Sikkim	208	7	40
23	Tamil Nadu	219	7	44
24	Tripura	205	6	41
25	Uttar Pradesh	216	8	39
26	Uttranchal	224	7	36
27	West Bengal	218	6	40
28	A & N Island	218	8	40
29	Chandigarh	233	7	40
30	Pondicherry	192	7	45
31	Overall Average India	213	7	40

Above table shows that average number of working days in schools was approximately 213 days. On an average, schools were having 7 periods in a day of approximately of 40 minutes duration. Further, maximum number of working days were in Chandigarh and minimum in Arunachal Pradesh approximately 233 and 178 days respectively.

Educational Committees

The data given in the table 12 reveals that out of 3545 rural schools, 2311 (65%) schools were having Village Education Committees (VEC). Area Education Committees were in 19% and 21% rural and urban schools respectively. School Management Committee was in approximately 50% and 52% rural and urban schools respectively. PTAs were in 71% urban and 65% rural and schools. Therefore, PTA was in more schools than other Committees.

Table 12: Schools having Education Committees

Committee		Area		
		R	U	Total
VEC	N	2311	387	2698
	%	65.19	31.16	56.36
AEC	N	677	258	935
	%	19.1	20.77	19.53
SMC	N	1765	650	2415
	%	49.79	52.33	50.45
PTA	N	2240	879	3119
	%	63.19	70.77	65.16
Total schools	N	3545	1242	4787
	%	100	100	100

Overall 65% schools had PTAs, followed by 56% VECs, 50% SMCs and 20% AECs. VECs were more in rural schools and others in urban schools.

Teachers Profile

In this part teachers profile in the selected schools has been discussed:

Table 13: Number of Teachers on Roll

Area	No of sampled school	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	3545	12039	54.89	9892	45.11	21931	6	39
Urban	1242	3790	32.23	7969	67.77	11759	9	39
Total	4787	15829	46.98	17861	53.02	33690	7	39

Table 13 shows that overall number of male teachers was less than female teachers. The number of female teachers in urban schools was more than twice than male teachers. However, the trend was reverse in rural schools. The average number of teachers per school in rural and urban areas was approximately 6 and 9 respectively. Further, average pupil teacher ratio was approximately 39:1 in both rural and urban areas schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teachers holding graduation degree and Sr. secondary level. Further, percentage of female teachers studied upto secondary level was higher than their counterparts. Approximately 1% teachers were below Class X level. Overall, more than 50% teachers were degree or PG degree holders. The data is given in table 14.

Table 14: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	64	1.03	1149	18.46	1670	26.83	2390	38.4	951	15.28	6224
Female	61	1.33	894	19.55	1142	24.98	1528	33.42	947	20.71	4572
Total	125	1.16	2043	18.92	2812	26.05	3918	36.29	1898	17.58	10796

Subjectwise Educational Qualification

Table 15 presents the percentage of teachers according to level upto which they had studied different subjects i.e. Mathematics, Science, Language and Social Sciences.

Table 15: The Level upto which various subjects studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	429	6.89	3880	62.34	1213	19.49	702	11.28	6224
	Female	574	12.55	2828	61.85	894	19.55	276	6.04	4572
	Total	1003	9.29	6708	62.13	2107	19.52	978	9.06	10796
Science	Male	644	10.35	3546	56.97	1188	19.09	846	13.59	6224
	Female	571	12.49	2632	57.57	868	18.99	501	10.96	4572
	Total	1215	11.25	6178	57.22	2056	19.04	1347	12.48	10796
Language (Medium)	Male	170	2.73	1738	27.92	2343	37.64	1973	31.7	6224
	Female	138	3.02	1280	28	1505	32.92	1649	36.07	4572
	Total	308	2.85	3018	27.95	3848	35.64	3622	33.55	10796
Social Science	Male	528	8.48	3185	51.17	1336	21.47	1175	18.88	6224
	Female	344	7.52	2356	51.53	950	20.78	922	20.17	4572
	Total	872	8.08	5541	51.32	2286	21.17	2097	19.42	10796

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. But the trend was reverse in case of Language and Social Sciences. Besides the percentage of male and female teachers who studied Mathematics, Social Science and Science upto Secondary and higher secondary level was approximately same except in Language where the percentage of male teacher was more than their counterparts. Besides, the percentage of male teachers who studied Mathematics, Language and Science below Class X was less than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in table 16.

Table 16: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed
4787	Male	3521	1702	128
	Female	2786	1310	111
	Total	6307	3012	239

Approximately 66% teacher had diploma/certificate in Primary/Elementary Education and approximately 32% teachers had B.Ed. degree. Very few teachers were having M.Ed degree.

Availability of Teaching Aids

Information collected indicates that majority of teaching aids were available to more than 85% teachers in schools except flash cards, science kits, mathematics kits and others. However, teachers guide was available to approximately 84% teachers in rural schools. Genderwise, all teaching aids such as dictionary, books other than text books, globe, charts, flash cards, science kits, mathematics kits and others were available to more female

teachers teaching in urban schools than male teachers. This trend was almost similar in rural areas, except for maps, and science kits. In other words teaching aids were available more to female teachers than male teachers.

In-service Training

The account of in-service training programmes organized by various agencies for teachers' during last three years is presented in Table 17.

Table 17: Inservice Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	238
	%	3.78
2. Block Resource Centre	N	1946
	%	30.95
3. Teacher Resource Centre	N	253
	%	4.02
4. Cluster Resource Centre	N	470
	%	7.47
5. DIET	N	2322
	%	36.93
6. SCERT	N	576
	%	9.16
7. Others	N	483
	%	7.68
Total Programmes	N	6288
	%	77

Data portrays that 6288 teachers were trained in the districts during last three years. Out of which approximately 31% teacher were trained by Block Resource Centres, 37% by DIET, less than 10% teacher were trained by School Complex, Cluster Resource Centre and by SCERT. However, minimum number of teachers were trained by School Complex i.e. approximately 4% of the total sampled teachers.

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Competency Based Teaching-Learning' and it was followed by Content Enrichment, Activity based joyful learning and 'General Training'. Minimum programmes were conducted on 'Use of Instructional Material'. However, 1089 various others training programmes were organized in the sampled states. The Effectiveness of various training programmes is given in Table 18 below:

Table 18: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	2347	1977	2180	1931
	%	37.33	31.44	34.67	30.71
Average	N	2889	3163	3019	3191
	%	45.94	50.30	48.01	50.75
Low	N	128	224	165	242
	%	2.03	3.56	2.62	3.85

It is evident that approximately 46% training programmes were average effective in terms of utility of knowledge gained during training programmes. However, 37% programmes were rated as 'Highly' useful. The impact of these training programmes was rated as average by 48% to 51% teachers in different subjects. However, improvement in

teaching-skills in all subjects due to these training programmes was rated 'High' by 31% to 35% teachers.

Out of total 10796 teachers 5432 (50.31%) teachers were without any in-service training during last three years. The percentage of male teachers who have not attended any in-service programme was more than female teachers. Similarly, percentage of female teachers both in urban and rural schools who had not attended any in-service training programme was less than their counterparts in the respective areas.

Assistance Received from Various Sources

The number of teachers who received assistance from various sources information collected indicates that teachers both in rural and urban areas were getting maximum assistance from head of the school and seldom it was followed other teachers of the school. However, sometimes they were also getting assistance from other sources like DIET etc.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 80% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in table 19.

Table 19: Educational Levels of Parents

Educational Level	Father		Mother	
	N	%	N	%
Illiterate	15601	17.67	34504	39.09
Up to Primary	25043	28.37	24834	28.13
Secondary & Sr. Secondary	35690	40.43	21055	23.85
Degree and above	4829	5.47	1658	1.88
Not Alive	2930	3.32	2721	3.08
Don't know/can't say	4178	4.73	3499	3.96

It was found that about 18% fathers and 39% mothers of the students were illiterate. Only 5% fathers and 2% mothers were having degree or higher educational qualification. Further, majority of the remaining parents were educated either upto primary level or secondary level overall educational status of mothers was poorer than fathers.

Occupation of Parents

This information is presented in table 20.

Table 20: Occupations of the Student's Parents

Occupation	Father		Mother	
	N	%	N	%
Daily wager	21609	24.48	12616	14.29
Skilled/clerical worker	16585	18.79	3430	3.88
Farmer	20719	23.47	4595	5.21
Shopkeeper/Businessmen	9947	11.27	1442	1.63
Professional	4552	5.16	915	1.04
Household/House wives	2992	3.39	59935	67.90
Not alive	4231	4.79	3228	3.66
Others	7636	8.65	2110	2.39

In majority of mothers were housewives and fathers were farmers and daily wagers. Only few mothers and approximately 5% fathers were professional. In decreasing order fathers were working as daily wagers, farmer, skilled/clerical worker, shopkeeper/businessmen, other professional and household etc. In decreasing order mothers were working as household, daily wagers, farmer, skilled worker, shopkeeper and professionals.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in table 21.

Table 21: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	12109	11808	5270	5779	17379	17587
	%	37.73	39.99	40.42	42.46	38.5	40.77
Mother	N	7482	7544	4210	4662	11692	12206
	%	23.31	25.55	32.29	34.25	25.9	28.3
Elder Brother/Sister	N	10340	10017	4278	4435	14618	14452
	%	32.21	33.93	32.81	32.59	32.39	33.5
Others	N	3465	3461	1820	2249	5285	5710
	%	10.8	11.72	13.96	16.52	11.71	13.24

Both boys and girls were getting help from family members. Overall, girls were getting better academic assistance than boys in both rural and urban areas from all family members. The descending order of academic assistance provided by the family members was father/guardian, elder brother/sister, mother and others in case of both girls and boys. However, in case of urban girls mothers were more helpful than elder brother/sister and others.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was less than girls. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was almost same. Only 3-4% boys and girls were attending schools less than 60% of total working days. Approximately 90% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the nationwide achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in 30 states and Union Territories of the country. The Language test has two components, namely Grammar & Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

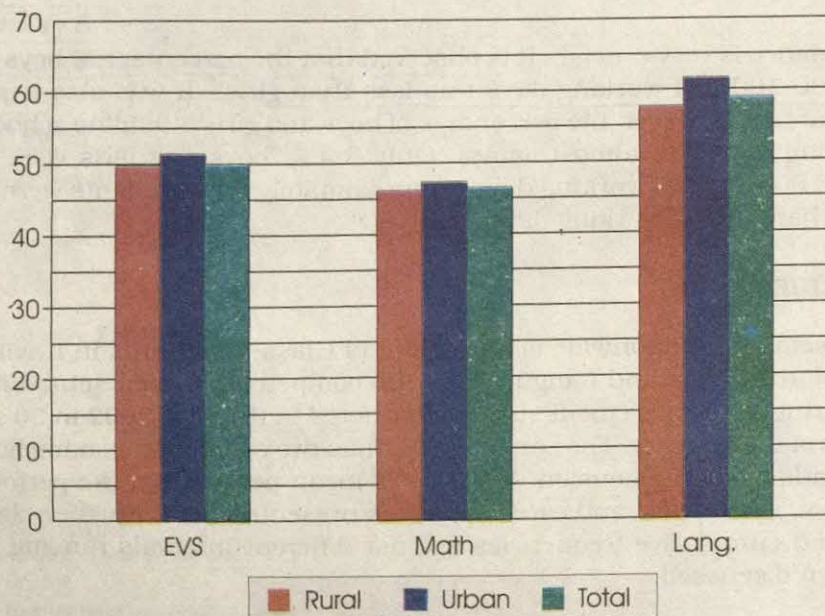
Genderwise and Areawise Achievement

Table 22 illustrates the genderwise and areawise achievement of class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 22: Genderwise and Areawise Achievement of Class V Students

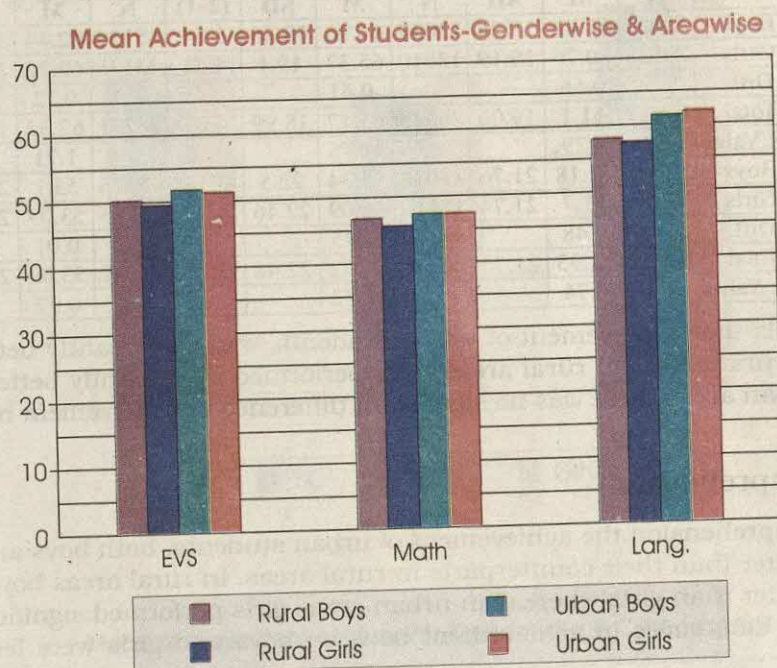
Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	32097	50.14	20.62	13039	51.69	20.57	1.55	45136	50.59	20.62	7.25
	Girls	29525	49.43	20.76	13610	51.21	20.57	1.78	43135	49.99	20.72	8.33
	Diff.		0.71			0.48				0.6		
	Total	61622	49.8	20.69	26649	51.44	20.57	1.64	88271	50.3	20.67	10.86
	CR Value		4.25			1.9				4.31		
Mathe- matics	Boys	32097	46.72	21.11	13039	47.36	21.53	0.64	45136	46.9	21.24	2.88
	Girls	29525	45.54	21.21	13610	47.29	21.61	1.75	43135	46.09	21.35	7.86
	Diff.		1.18			0.07				0.81		
	Total	61622	46.15	21.17	26649	47.32	21.57	1.17	88271	46.51	21.3	7.44
	CR Value		6.91			0.26				5.65		
Langu- age	Boys	32097	57.95	18	13039	61.36	18.43	3.41	45136	58.94	18.19	17.94
	Girls	29525	57.37	18.18	13610	61.89	18.51	4.52	43135	58.79	18.41	23.7
	Diff.		0.58			-0.53				0.15		
	Total	61622	57.67	18.09	26649	61.63	18.47	3.96	88271	58.87	18.3	29.42
	CR Value		3.98			-2.34				1.22		

Mean Achievement of Students-Areawise



Environmental Studies

The data presented in Table 22 reveals that performance of urban students, both boys and girls was significantly better than their counterparts in rural areas. However, the differences in achievement were less than 2 percent. The achievement of boys was significantly better than girls. In rural areas boys performed significantly better than girls. The difference in achievement between boys and girls was less than one percent.



Mathematics

The data presented in Table 22 reveals that performance of urban students, both boys and girls was significantly better than their counterparts in rural areas. However, the differences in achievement were less than 2 percent. The achievement of boys was significantly better than girls both in rural areas and total group. The difference in achievement between boys and girls was less than one percent.

Language

The achievement of urban students, both boys and girls, was significantly better than the rural students. In rural areas boys performed significantly better than girls whereas in urban areas girls performed better than boys. The difference in achievement between boys and girls were less than one percent.

Grammar & Usage

Table 23 displays areawise and genderwise achievement of students in Grammar & Usage and Reading Comprehension component of the Language test.

Table 23: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	32097	61.42	18.94	13039	64.96	18.88	3.54	45136	62.44	18.99	18.04
	Girls	29525	60.76	19.19	13610	65.37	19.1	4.61	43135	62.22	19.28	23.26
	Diff.		0.66			-0.41				0.22		
	Total	61622	61.1	19.06	26649	65.17	18.99	4.07	88271	62.33	19.13	29.2
	CR Value		4.29			-1.76				1.71		
Reading Compre- hension	Boys	32097	52.18	21.76	13039	55.34	22.5	3.16	45136	53.1	22.02	13.65
	Girls	29525	51.7	21.74	13610	56.09	22.46	4.39	43135	53.09	22.06	19.06
	Diff.		0.48			-0.75				0.01		
	Total	61622	51.95	21.75	26649	55.72	22.48	3.77	88271	53.09	22.04	23.1
	CR Value		2.74			-2.72				0.07		

The data reveals that achievement of urban students, was significantly better than the students from rural areas. In rural areas boys performed significantly better than girls. However, in urban areas there was no significant difference in achievement between boys and girls.

Reading Comprehension

In Reading Comprehension the achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In rural areas boys performed significantly better than girls whereas in urban areas girls performed significantly better than boys. The differences in achievement between boys and girls were less than one percent.

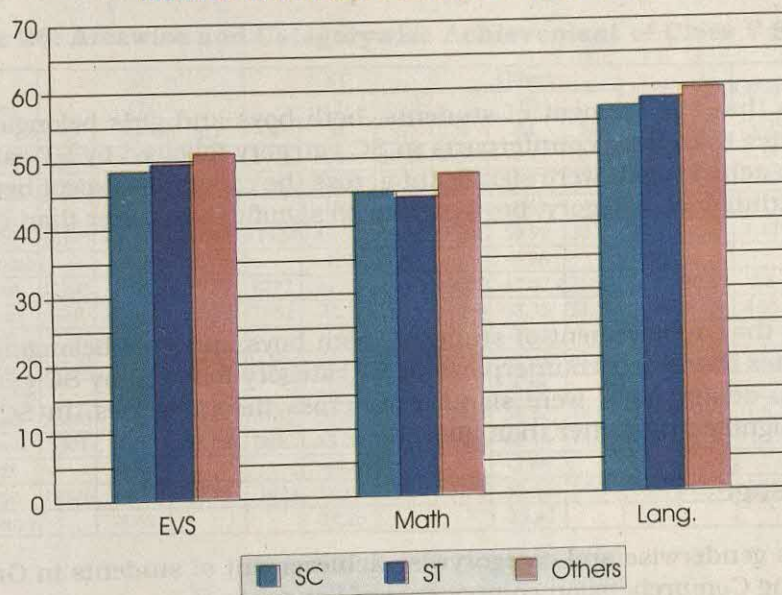
Genderwise and Categorywise Achievement

Table 24 illustrates the genderwise and categorywise achievement of class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

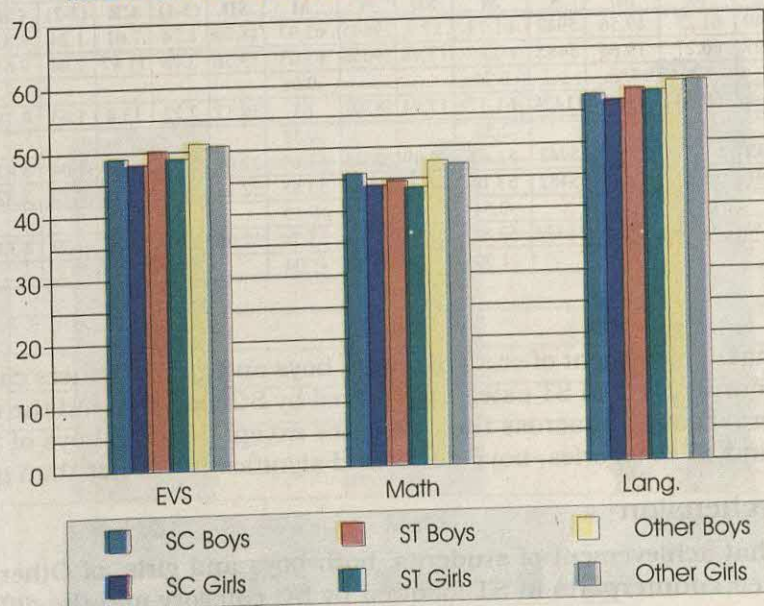
Table 24: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Boys	9549	49.02	20.98	5942	50.07	19.78	29645	51.19	20.63	2.17	8.83	1.12	3.95	1.05	3.14
	Girls	8597	47.98	20.74	5482	48.92	19.92	29056	50.79	20.81	2.81	11.03	1.87	6.33	0.94	2.69
	Diff.		1.04			1.15			0.4							
	Total	18146	48.53	20.88	11424	49.52	19.85	58701	50.99	20.72	2.46	13.9	1.47	7.19	0.99	4.09
	CR Value		3.35			3.09			2.34							
Mathematics	Boys	9549	45.9	21.6	5942	44.6	19.85	29645	47.69	21.34	1.79	7.06	3.09	10.81	-1.3	-3.83
	Girls	8597	43.94	21.35	5482	43.6	19.63	29056	47.2	21.58	3.26	12.41	3.6	12.25	-0.34	-0.97
	Diff.		1.96			1			0.49							
	Total	18146	44.97	21.5	11424	44.12	19.75	58701	47.45	21.46	2.48	13.59	3.33	16.25	-0.85	-3.48
	CR Value		6.14			2.71			2.77							
Language	Boys	9549	57.59	18.78	5942	58.33	16.94	29645	59.49	18.21	1.9	8.66	1.16	4.76	0.74	2.53
	Girls	8597	56.56	18.7	5482	58.05	17.21	29056	59.59	18.48	3.03	13.23	1.54	6	1.49	4.84
	Diff.		1.03			0.28			-0.1							
	Total	18146	57.1	18.75	11424	58.19	17.07	58701	59.54	18.34	2.44	15.4	1.35	7.64	1.09	5.15
	CR Value		3.70			0.87			-0.66							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise & Categorywise



Environmental Studies

The data reveals that achievement of students, both boys and girls belonging 'Others' category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories. Within categories, boys performed significantly better than girls.

Mathematics

The data reveals that achievement of students, both boys and girls belonging 'Others' category was better than their counterparts in SC category followed by ST category and the differences in achievement were significant across the categories except between girls of ST and SC. Within each category, boys performed significantly better than girls.

Language

The data reveals that achievement of students, both boys and girls belonging 'Others' category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories. In SC category, boys performed significantly better than girls.

Grammar & Usage

Table 25 displays genderwise and categorywise achievement of students in Grammar & Usage and Reading Comprehension components of Language test.

Table 25: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	9549	61.23	19.56	5942	61.73	17.9	29645	62.97	18.99	1.74	7.61	1.24	4.82	0.5	1.63
	Girls	8597	60.27	19.66	5482	60.99	17.98	29056	63.03	19.36	2.76	11.47	2.04	7.61	0.72	2.23
	Diff.		0.96			0.74			-0.06							
	Total	18146	60.78	19.61	11424	61.37	17.94	58701	63	19.17	2.22	13.4	1.63	8.78	0.59	2.66
	CR Value		3.29			2.20			-0.38							
Reading Comprehension	Boys	9549	51.53	22.62	5942	52.65	20.89	29645	53.69	22.02	2.16	8.17	1.04	3.47	1.12	3.14
	Girls	8597	50.38	22.41	5482	53.16	20.9	29056	53.88	22.11	3.5	12.76	0.72	2.32	2.78	7.48
	Diff.		1.15			-0.51			-0.19							
	Total	18146	50.99	22.53	11424	52.89	20.89	58701	53.78	22.06	2.79	14.65	0.89	4.13	1.9	7.39
	CR Value		3.43			-1.30			-1.04							

The data reveals that achievement of students, both boys and girls of Others category was better than their counterparts in ST category followed by SC category and the differences in achievement were significant across the categories except between boys of ST and SC categories. In SC and ST categories, boys performed significantly better than girls.

Reading Comprehension

The data reveals that achievement of students, both boys and girls, of Others category was better than their counterparts in ST followed by SC category and the differences in achievement were significant across the categories. In SC category, boys performed significantly better than girls.

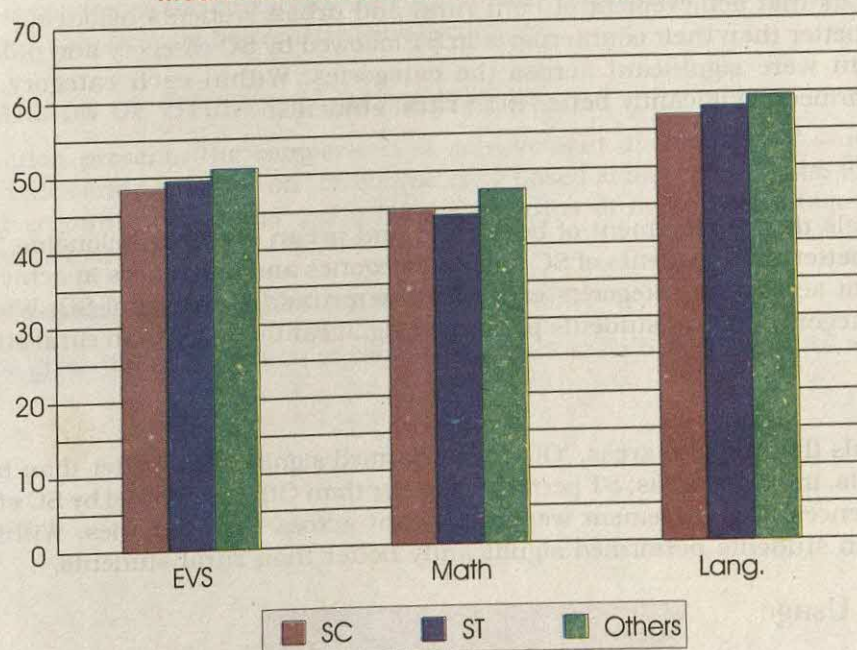
Areawise and Categorywise Achievement

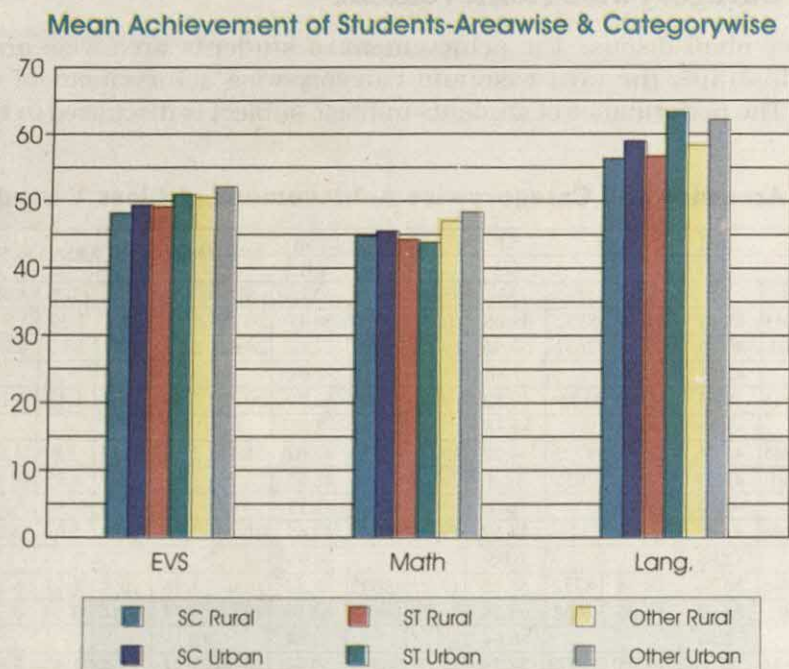
In this section, we shall discuss the achievement of students area-wise and category-wise. Table 26 illustrates the area-wise and category-wise achievement of students in different subjects. The performance of students in these subjects is discussed in the following paragraphs.

Table 26: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Rural	12845	48.19	20.84	8772	49.08	20.04	40005	50.47	20.75	2.28	10.8	1.39	5.85	0.89	3.15
	Urban	5301	49.35	20.95	2652	50.96	19.15	18696	52.11	20.61	2.76	8.5	1.15	2.87	1.61	3.42
	Diff.		-1.16			-1.88			-1.64							
	Total	18146	48.53	20.88	11424	49.52	19.85	58701	50.99	20.72	2.46	13.9	1.47	7.19	0.99	4.09
	CR Value		-3.40			-4.38			-8.96							
Mathematics	Rural	12845	44.76	21.55	8772	44.22	19.67	40005	47.02	21.31	2.26	10.37	2.8	11.89	-0.54	-1.91
	Urban	5301	45.48	21.38	2652	43.8	20.01	18696	48.35	21.75	2.87	8.59	4.55	10.84	-1.68	-3.45
	Diff.		-0.72			0.42			-1.33							
	Total	18146	44.97	21.5	11424	44.12	19.75	58701	47.45	21.46	2.48	13.59	3.33	16.25	-0.85	-3.48
	CR Value		-2.06			0.95			-6.95							
Language	Rural	12845	56.36	18.74	8772	56.65	17.02	40005	58.32	18.07	1.96	10.4	1.67	8.23	0.29	1.18
	Urban	5301	58.92	18.66	2652	63.29	16.23	18696	62.16	18.65	3.24	11.16	-1.13	-3.29	4.37	10.76
	Diff.		-2.56			-6.64			-3.84							
	Total	18146	57.1	18.75	11424	58.19	17.07	58701	59.54	18.34	2.44	15.4	1.35	7.64	1.09	5.15
	CR Value		-8.40			-18.25			-23.47							

Mean Achievement of Students-Categorywise





Environmental Studies

The data reveals that achievement of both rural and urban students belonging 'Others' category was better than their counterparts in ST followed by SC category and differences in achievement were significant across the categories. Within each category, urban students performed significantly better than rural students.

Mathematics

The data reveals that achievement of both rural and urban students belonging 'Others' category was better than students of SC and ST categories and differences in achievement were significant across the categories except between rural ST and rural SC. Within SC and Others categories, urban students performed significantly better than rural students.

Language

The data reveals that in rural areas, 'Others' performed significantly better than both SC and ST students. In urban areas, ST performed better than Others followed by SC students and the differences in achievement were significant across the categories. Within each category, urban students performed significantly better than rural students.

Grammar & Usage

Table 27 displays the areawise and categorywise achievement of students in Grammar & Usage and Reading Comprehension components of Language test.

Table 27: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	12845	59.98	19.67	8772	59.91	17.98	40005	61.72	19.07	1.74	8.79	1.81	8.44	-0.07	-0.27
	Urban	5301	62.7	19.34	2652	66.22	16.93	18696	65.73	19.11	3.03	10.09	-0.49	-1.37	3.52	8.33
	Diff.		-2.72			-6.31			-4.01							
	Total	18146	60.78	19.61	11424	61.37	17.94	58701	63	19.17	2.22	13.4	1.63	8.78	0.59	2.66
	CR Value		-8.57			-16.57			-23.70							
Reading Comprehension	Rural	12845	50.31	22.42	8772	51.23	20.82	40005	52.64	21.7	2.33	10.33	1.41	5.7	0.92	3.09
	Urban	5301	52.61	22.7	2652	58.41	20.19	18696	56.23	22.63	3.62	10.26	-2.18	-5.12	5.8	11.58
	Diff.		-2.3			-7.18			-3.59							
	Total	18146	50.99	22.53	11424	52.89	20.89	58701	53.78	22.06	2.79	14.65	0.89	4.13	1.9	7.39
	CR Value		-6.22			-15.93			-18.14							

The data reveals that in rural areas, 'Others' performed significantly better than both SC and ST students. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST respectively. Within each category, urban students performed significantly better than rural students.

Reading Comprehension

The data reveals that in rural areas achievement of Others was better than ST followed by SC students and differences in achievement were significant across the categories. In urban areas, ST performed better than Others followed by SC students and differences in achievement across the categories were significant. Within each category, urban students performed significantly better than rural students.

COMPARISON OF STUDENTS' ACHIEVEMENT

This section presents the comparison of achievement of the class V students in EVS, Mathematics and Language on the competency based achievement tests. It provides for a detailed account of students' performance in terms of mean percentage and standard deviation across states and UTs.

Achievement of students across the States

Table 28 gives the achievement of class V students in EVS, Mathematics and Language.

The achievement of class V students in EVS, Mathematics and Language in states/UTs is presented below in graphical form for comparison across states/UTs.

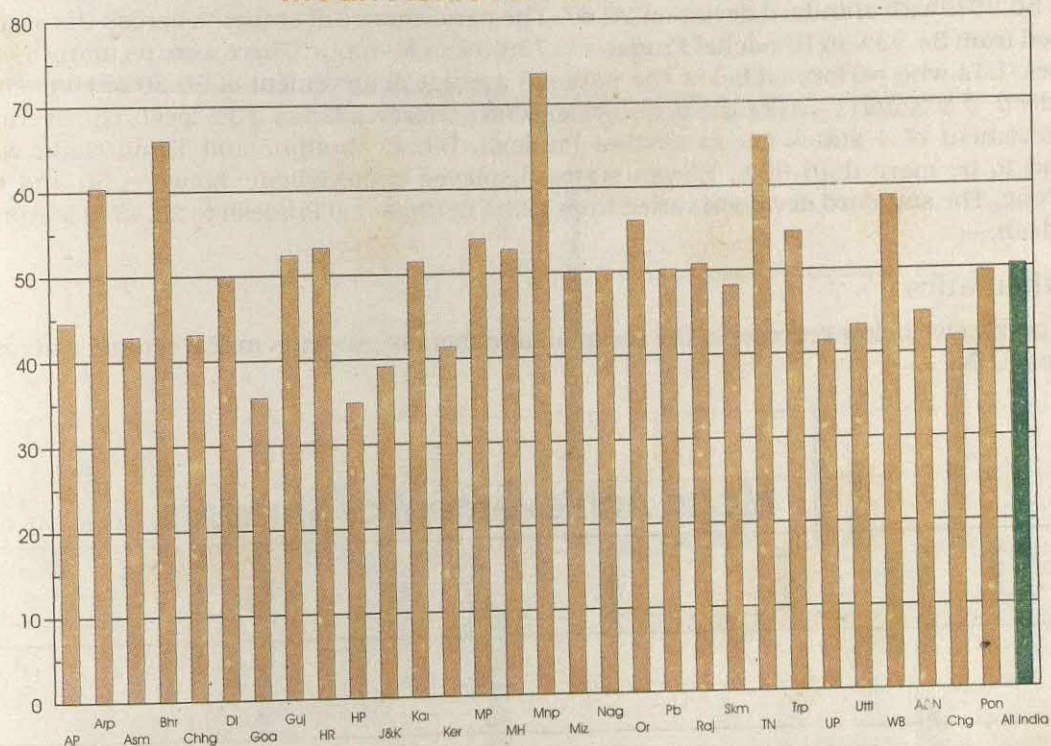
Table 28: Mean Percent of Achievement of students in EVS, Mathematics and Language

State	No of Students	EVS		Diff. in Mean with National Average	Mathematics		Diff. in Mean with National Average	Language		Diff. in Mean with National Average
		M%	SD		M%	SD		M%	SD	
A.P.	2333	44.58	20.23	-5.72	43.53	20.98	-2.98	54.83	17.11	-3.74
Arunachal P.	1571	60.40	20.08	10.10	53.47	18.61	6.96	61.33	16.36	2.76
Assam	3689	42.90	16.31	-7.40	40.03	16.84	-6.48	49.16	12.61	-9.41
Bihar	2239	65.97	22.02	15.67	62.62	23.25	16.11	65.22	18.95	6.65
Chhatisgarh	2597	43.15	18.11	-7.15	38.36	17.26	-8.15	49.69	16.08	-8.88
Delhi	5876	49.96	19.57	-0.34	48.20	19.75	1.69	63.15	16.88	4.58
Goa	1231	35.60	15.47	-14.70	30.48	13.49	-16.03	44.68	14.31	-13.89
Gujarat	2453	52.38	19.55	2.08	48.36	19.12	1.85	56.18	18.09	-2.39
Haryana	4604	53.21	20.00	2.91	53.33	18.52	6.82	60.45	17.33	1.88
H.P.	4553	34.93	12.01	-15.37	34.41	13.55	-12.10	49.99	14.30	-8.58
J & K	1247	39.14	17.37	-11.16	36.30	16.48	-10.21	49.59	16.38	-8.98
Karnataka	3853	51.46	20.39	1.16	46.03	21.27	-0.48	58.63	18.97	0.06
Kerala	4342	41.36	13.64	-8.94	35.90	14.64	-10.61	54.99	14.46	-3.58
M.P.	3791	54.09	23.43	3.79	49.03	22.68	2.52	58.25	21.91	-0.32
Maharashtra	4981	52.82	20.27	2.52	44.32	20.73	-2.19	62.12	20.10	3.55
Manipur	2140	73.60	15.98	23.30	74.46	19.71	27.95	73.39	13.60	14.82
Mizoram	2392	49.93	14.77	-0.37	41.07	14.68	-5.44	66.91	10.38	8.34
Nagaland	1038	50.05	21.86	-0.25	45.71	23.92	-0.80	59.55	17.91	0.98
Orissa	2979	56.03	19.31	5.73	46.95	20.75	0.44	60.73	17.89	2.16
Punjab	3143	50.18	20.70	-0.12	49.62	21.34	3.11	58.05	15.77	-0.52
Rajasthan	2357	50.77	21.43	0.47	49.37	20.82	2.86	60.65	17.44	2.08
Sikkim	2451	48.16	16.11	-2.14	40.66	14.95	-5.85	50.26	13.13	-8.31
Tamil Nadu	4768	66.01	18.71	15.71	58.37	22.81	11.86	71.09	17.50	12.52
Tripura	1587	54.50	22.63	4.20	52.71	22.58	6.20	63.79	15.95	5.22
U.P.	5098	41.45	19.10	-8.85	37.81	19.74	-8.70	50.20	19.24	-8.37
Uttaranchal	2741	43.27	17.46	-7.03	38.83	16.82	-7.68	56.35	17.62	-2.22
West Bengal	4739	58.65	20.68	8.35	60.11	21.94	13.60	70.67	15.31	12.10
A&N Island	811	44.80	16.48	-5.50	40.69	16.96	-5.82	54.49	15.95	-4.08
Chandigarh	1405	41.81	13.12	-8.49	44.98	13.81	-1.53	55.99	15.33	-2.58
Pondicherry	1262	49.59	16.19	-0.71	36.59	17.24	-9.92	59.23	17.87	0.66
Total/ Average	88271	50.30	20.67	--	46.51	21.30	--	58.57	18.30	--

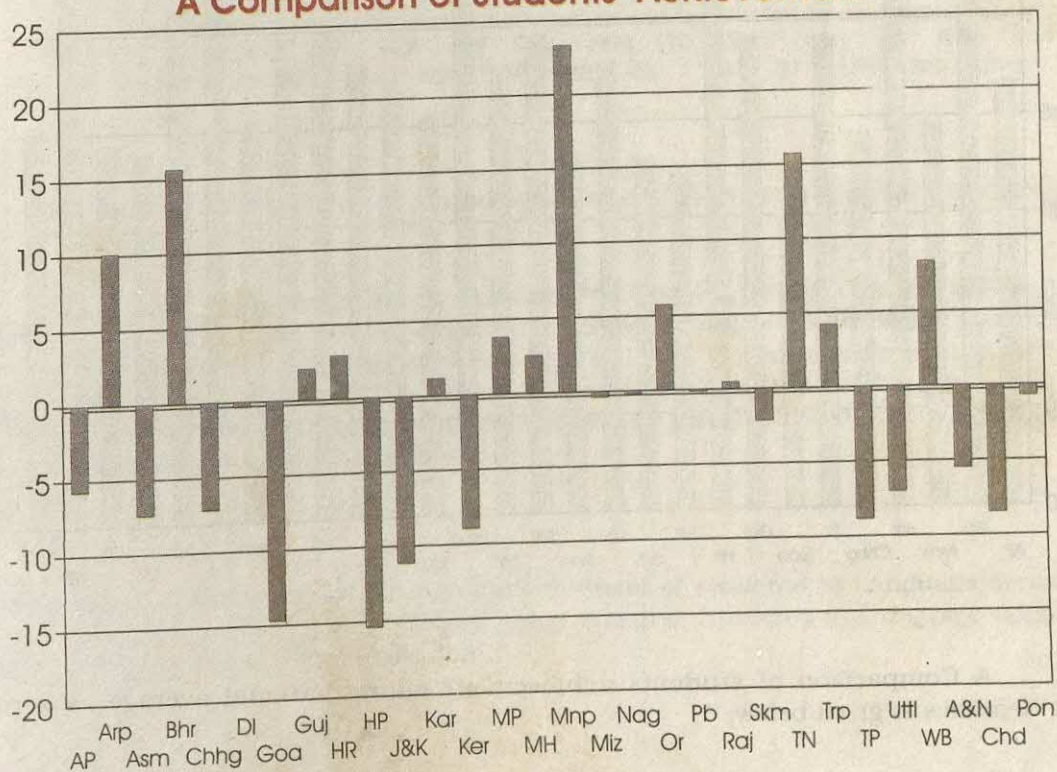
Environmental Studies

The graph below displays the mean achievement of students in Environmental Studies. Comparison of students achievement taking national average as zero in EVS is also presented here.

Mean Achievement of Students



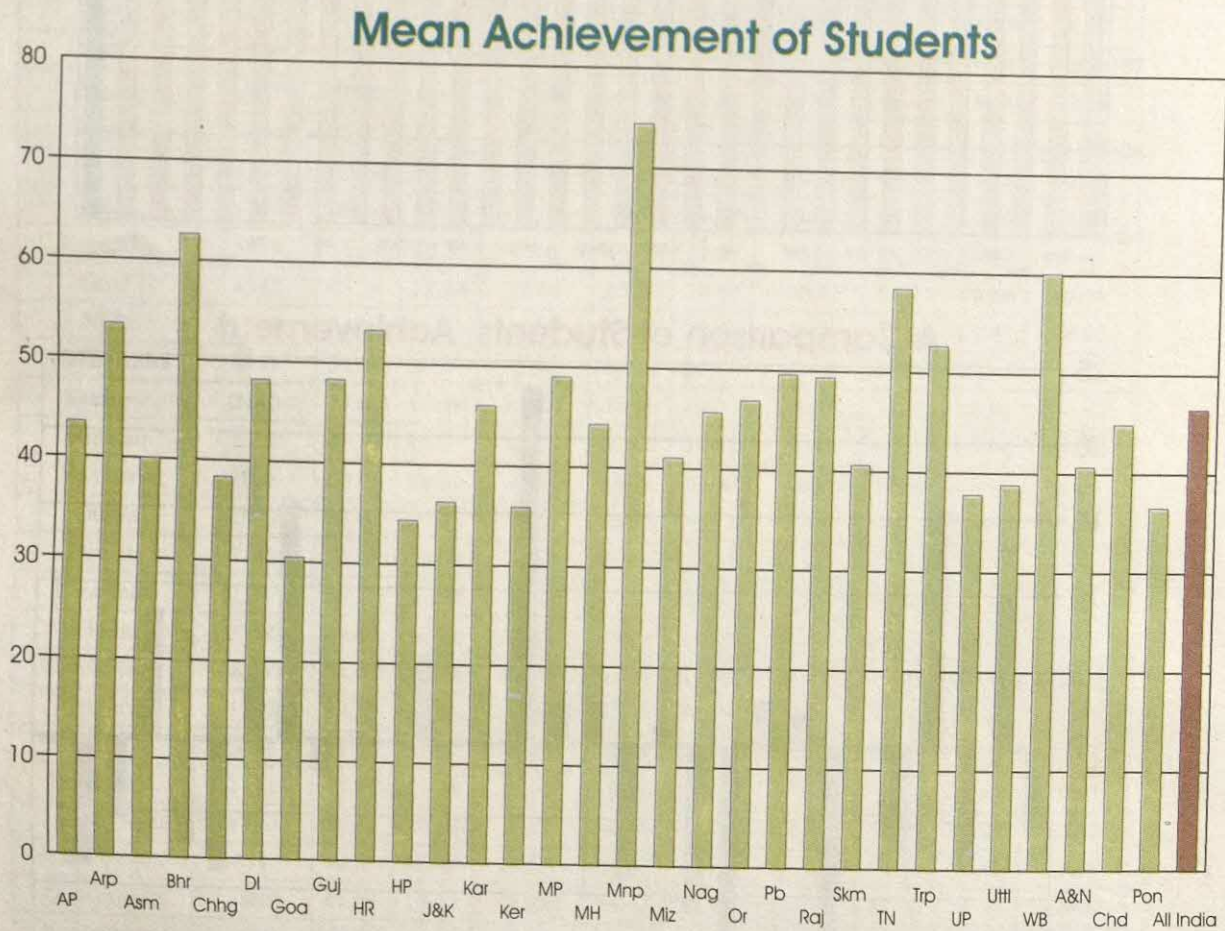
A Comparison of Students Achievement



The average achievement of 88,271 students covering 27 states and 3 UTs in EVS was 50.30% with standard deviation 20.67. The performance of students across the states varied from 34.93% in Himachal Pradesh to 73.60% in Manipur. There were as many as 17 states/UTs who performed below the national average achievement of 50.30%. Himachal Pradesh, J & K and Goa are the three states who performed below 40% level. The average achievement of 4 states i.e. Arunachal Pradesh, Bihar, Manipur and Tamil Nadu was found to be more than 60%. Eleven states displayed achievement between 50 and 60 percent. The standard deviation varied from 12.01 in Himachal Pradesh to 23.43 in Madhya Pradesh.

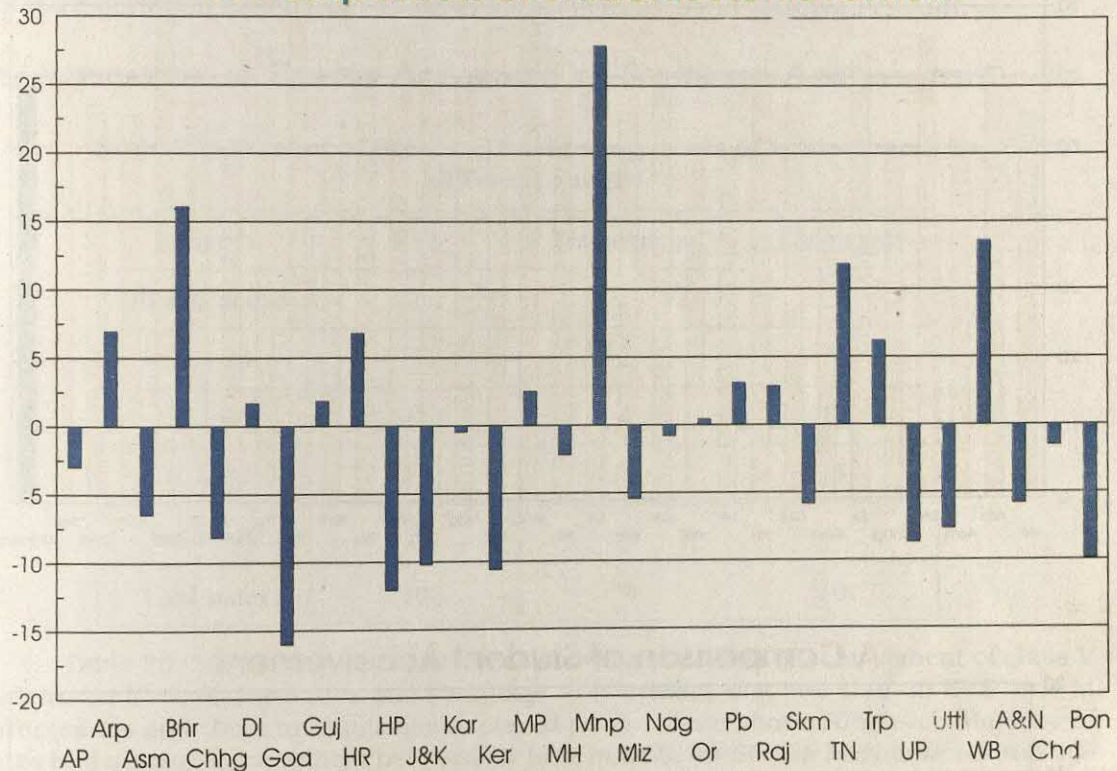
Mathematics

The graph give below represents the mean achievement of students in Mathematics across states/UTs.



A Comparison of students achievement taking national average as zero in Mathematics is given below:

A Comparison of Students Achievement



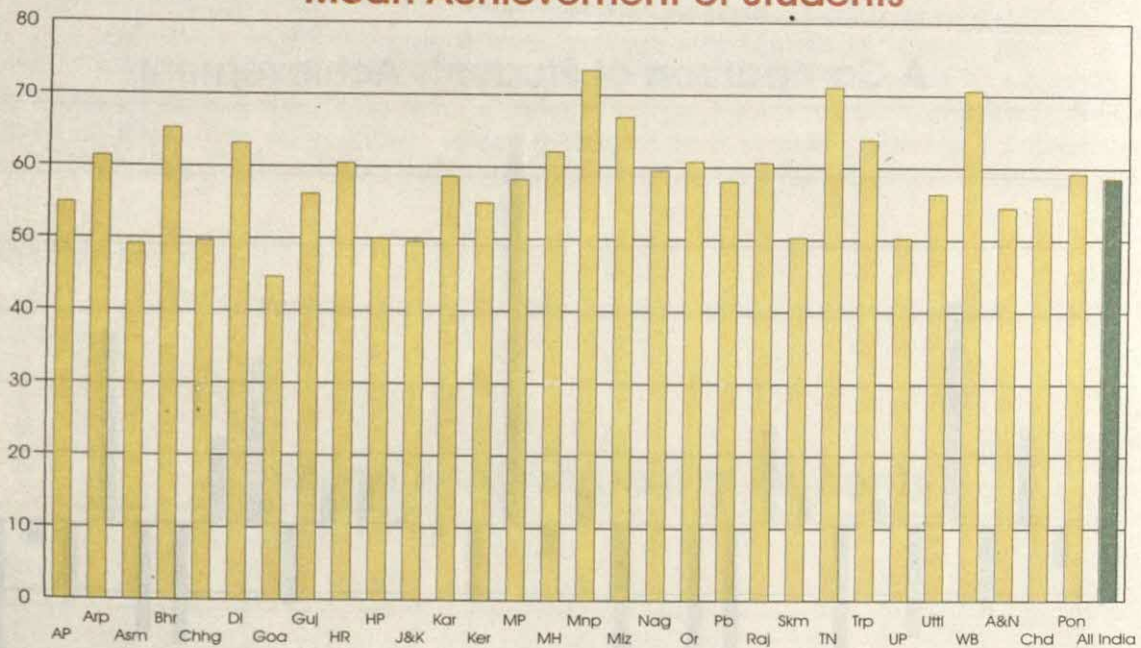
The average achievement in Mathematics was 46.51% with standard deviation 21.30.

The score of students across the states varied from 30.48% in Goa to 74.46% in Manipur. There were as many as 17 states/UTs whose average was below the national average of 46.51%. The average achievement in 8 states/UTs was even less than 40%. Only 3 states, Manipur, Bihar and West Bengal demonstrated more than 60% achievement. Four states demonstrated achievement between 50 and 60 percent. The standard deviation varied from 13.49 in Goa to 23.92 in Nagaland.

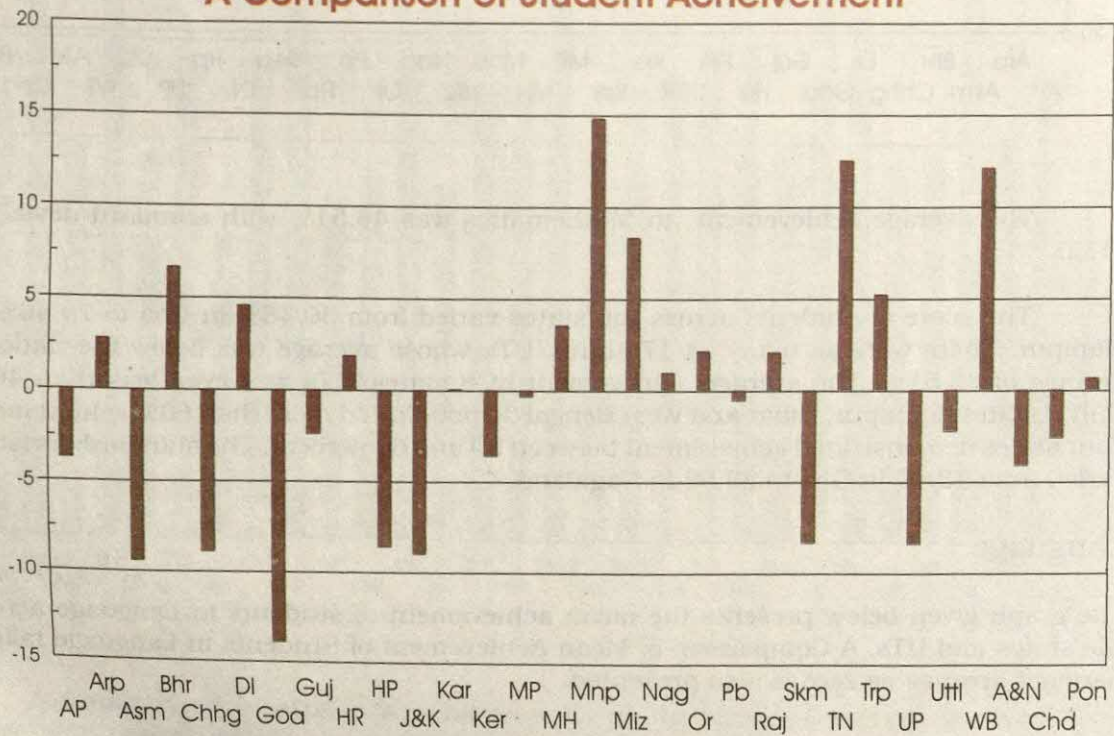
Language

The graph given below presents the mean achievement of students in Language across the states and UTs. A Comparison of Mean Achievement of Students in Language taking national average as zero is also presented.

Mean Achievement of Students



A Comparison of Student Achievement



The average achievement of students in language was 58.57% with standard deviation 18.30. The performance of students across the states/UTs varied from 44.68% in Goa to 73.39% in Manipur. There were as many as 15 states/UTs who performed below the national average of 58.57%. The average achievement in 12 states was found to be more than 60% and of them 3 demonstrated more than 70% achievement level. The standard deviation varied from 10.38 in Mizoram to 21.91 in Madhya Pradesh.

CLASSIFICATION OF STATES ACCORDING TO STUDENTS ACHIEVEMENT

Table 29: Number of States/UTs showing levels of achievement in different ranges

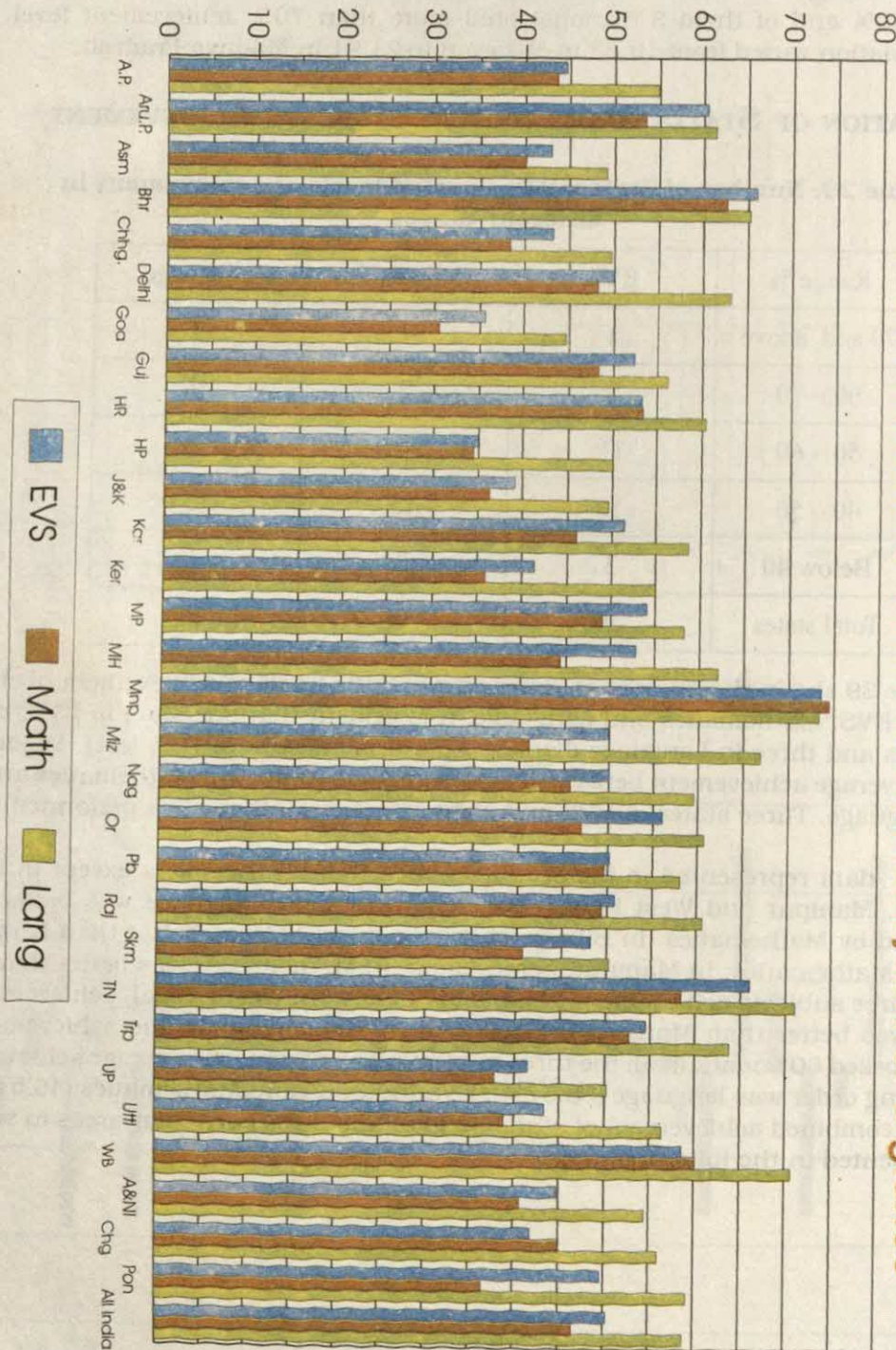
Range %	EVS	Mathematics	Language
70 and above	1	1	3
60 – 70	3	2	9
50 – 60	11	4	13
40 – 50	12	15	15
Below 40	3	8	--
Total states	30	30	30

Table 29 shows the number of states showing the levels of achievement of class V students in EVS, Mathematics and Language. It is evident that one state in EVS, one in Mathematics and three in Language displayed performance above 70% level. Majority of states had average achievement between 40-60% in EVS, 40-50% in Mathematics and 40-60% in Language. Three states in EVS and eight states in Mathematics performed below 40 percent.

The data represented in the graph revealed that all the states except in Bihar, Chandigarh, Manipur and West Bengal the achievement in Language was better than EVS followed by Mathematics. In Bihar, achievement in EVS was better than Language followed by Mathematics. In Manipur, achievement in Mathematics was better than EVS and in all three subjects achievement crossed 70% mark. In West Bengal, achievement in Language was better than Mathematics followed by EVS. In Bihar, the achievement of students crossed 60% mark in all the three subjects. The nation wide average achievement in decreasing order was language (58.57%), EVS (50.30%) and Mathematics (46.51%).

The combined achievement of students in all the three curricular areas in states/UTs is presented in the following graph.

Mean Achievement of Students in All subjects at a glance

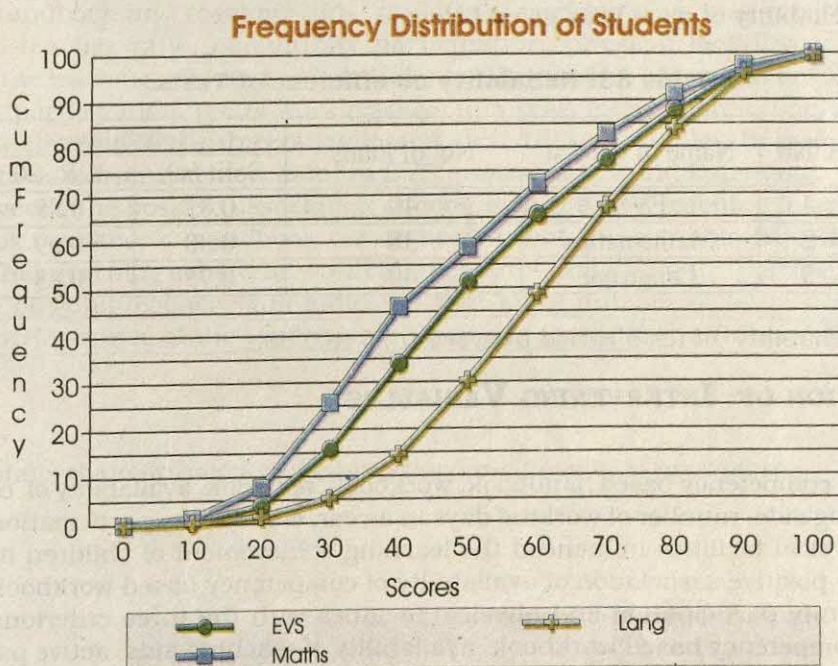


DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 30: Distribution of Students of Class V on the basis of their Achievement

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	523	2869	10626	16113	15313	12592	10410	9375	7834	2616
	cf	523	3392	14018	30131	45444	58036	68446	77821	85655	88271
	cf(%)	0.59	3.84	15.88	34.13	51.48	65.75	77.54	88.16	97.04	100
Math	f	1176	5657	15822	18123	11071	11978	9412	7608	5149	2275
	cf	1176	6833	22655	40778	51849	63827	73239	80847	85996	88271
	cf(%)	1.33	7.74	25.67	46.20	58.74	72.31	82.97	91.59	97.42	100
Language	f	250	1089	3320	8195	13845	16489	16396	14682	10569	3436
	cf	250	1339	4659	12854	26699	43188	59584	74266	84835	88271
	cf(%)	0.28	1.52	5.28	14.56	30.25	48.93	67.50	84.13	96.11	100

The data reveal that in all the three subjects distribution of scores the entire range from 0-100 percent. The least number of cases in EVS (523), in mathematics (1176) and in language (250) were in the range 0-10 percent. The maximum number of cases in EVS (16113), in Mathematics (18,123) and in Language (16,489) were in the range 30-40 percent, 30-40 percent and 50-60 percent respectively. The 48.52% students in EVS, 41.26% in Mathematics and 69.75% in Language scored more than 50% marks whereas 34.25% in EVS, 27.69% in Mathematics and 51.07% in Language scored more than 60% marks. Students achievement was better in Language than EVS which in turn was better than in Mathematics.



CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 30 below:

Table 31: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	1
25 to less than 50	Difficult	21	11	22
50 to less than 75	Average	19	24	15
75 to 100	Very Easy	0	5	0

Majority of items had facility value between 25 and 75. Only one item was very difficult in Mathematics and five items were very easy in Language.

Table 32: Distribution of test items according to DI

Range of Values	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	1
.30 to less than .70	Average Discrimination	39	39	35
Less than .30	Poor Discrimination	1	1	2

Majority of items in all the three subjects were of average discrimination index. The values of FV and DI of all items for the nationwide student population is given in appendix-3.

The reliability of tests is as given below:

Table 33: Reliability co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.83	0.88
2	Mathematics	38	0.80	0.89
3	Language	40	0.75	0.85

The reliability of tests varied between 0.75 to 0.89.

CONTRIBUTION OF INTERVENING VARIABLES

School

Availability of competency based handbook, workbook, textbook, availability of competency based teaching aids, number of working days in a year, community participation, teaching time and physical facilities influenced the learning achievement of children in the three subjects. The positive association of availability of competency based workbook, teaching aids, community participation and physical facilities with the three criteria indicates that use of competency based workbook, availability of teaching aids, active participation of community and physical facilities help the children in improving their learning achievement in the three subjects.

Multiple regression analysis was employed to study the influence of intervening variables like home, school and teacher on student's achievement. The outcomes are follows:

Table 34: Regression and Correlation Co-efficient of the Predictors of School related Variables with the Criterions.

The predictors together could explain only 2.0% of total variation in achievement of EVS, 1.6% variation in achievement in Mathematics and 2.6% variation in achievement in Language separately.

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	31.778	--	28.308	--	41.397	--
PTR	-0.016*	-0.024*	-0.020	-0.029*	-0.011	-0.030
Com Participation	0.536	0.042*	0.447	0.032*	0.534*	0.041**
Teaching aid	0.094	0.026*	0.146**	0.049**	0.129	0.085**
Physical facility	0.260	0.018	0.564	0.057**	0.451**	0.097**
Ancillary facility	0.105	0.005	0.196	0.021*	0.378**	0.091**
Instructional time	0.042**	0.125**	0.34**	0.091**	0.027**	0.087**
Working day	0.023	0.04**	0.015	0.025*	-0.836*	-0.029*
Index-Competency TLM	0.662*	0.39**	0.053	0.008	-0.836*	-0.029*
R2	0.020		0.016		0.026	

* Significant at 0.05 level and ** Significant at 0.01 level

The availability of competency based teaching learning materials like workbook, textbook, handbook and teaching aids, number of working days in a year, instructional time, pupil-teacher ratio, community participation, physical facilities in the school, influenced the learning achievement of students. The positive association of teaching aids, community participation, no. of working days in a year, instructional time, physical and ancillary facilities three subjects indicated that these variables helped students in improving their learning achievement in EVS, mathematics and Language.

However, the positive association of competency based teaching learning material like textbook, workbook, handbook etc. indicated that this variable helped students in improving their learning achievements in Mathematics and EVS only. Further, the negative association of pupil-teacher ratio indicated that more number of pupil in a classroom power the performance of the students' achievement in all three subjects.

Teacher

Table 35 details the regression and co-relation co-efficients of predictors.

Table 35: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	48.37	--	44.917	--	58.700	--
Index- Qualification	0.06	0.007	0.694**	0.031**	1.350**	0.0667**
Index- Experience	0.109	0.036**	0.259**	0.003	0.338	0.003
Index- Teaching Aid	3.832**	0.143**	3.646**	0.125**	2.497**	0.106**
Index- School Org.	0.251**	0.087**	0.212**	0.068**	0.032	0.33**
R²	0.022		0.018		0.015	

**** Significant at 0.01 level**

The predictors together could explain only 2.2% of total variation in achievement of EVS, 1.8% in achievement of Mathematics and 1.5% in achievement of Language.

The use of teaching aids and teachers giving home assignment to students and teachers receiving help from school organization had positive association with the learning achievement of students in all three subjects. It indicates that these variables help students' achievement in all three subjects. However, teachers' educational and professional qualification significantly helped students learning achievement in both Mathematics and Language. Likewise, teachers experience, employment status and training significantly helped in students' achievement in EVS only.

Pupil

Teaching-learning processes adopted by teachers, schooling practices and academic assistance provided by family members, percentage attendance of students in school, age of children and educational status and occupation of parents influence the learning achievement of children in the three subjects, EVS, Mathematics and Language. The positive association of teaching learning processes adopted by teachers, schooling practices and academic assistance provided by family members and percentage attendance of students in school with the three criterions indicates that active involvement of teachers in school, and that of family members at home and attending school regularly help the children in improving their learning achievement in the three subjects.

The negative association of age of students with the criterions indicates that children of higher age score poorly. It is possible that the some children are repeaters, inspite of 'no detention' policy in vogue. The negative association of educational status and occupation of parents with the three criterions indicates that the parents and teachers teach at variance. Regression and correlation co-efficients of predictor are given in Table 36.

Table 36: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	47.011	--	44.086	--	57.084	--
Index- Ed. & Occu.	1.313**	0.082**	1.217**	0.086	2.967**	0.156**
Index- Schooling	2.197**	0.108**	3.094**	0.134**	2.199**	0.141**
Index- TLP	5.409**	0.157**	5.418**	0.153**	4.349**	0.147**
Index- Age	-0.572**	-0.64**	-0.478**	-0.060**	-0.680**	-0.090**
Detention	-0.252**	-0.026**	-0.445**	-0.038**	-0.346**	-0.043**
Attendance	0.118**	0.11**	0.096**	0.090**	0.115**	0.121**
R²	0.048		0.049		0.068	

**** Significant at 0.01 level**

The predictors together could explain only 4.8% of total variation in achievement of EVS. 4.9% in achievement of Mathematics and 6.8% in achievement of Language separately.

Educational status and occupation of parents, teaching learning factors like regularity of teacher, teacher giving home assignment to students, teacher giving frequent class tests, regular attendance of the students and help from family members had positive association with three subjects meaning thereby that all these variables helped students in their achievement. However, students' age and detention in earlier classes had negative impact in students learning achievement in all three subjects.

INTERPRETATION THROUGH T-TEST AND ANALYSIS OF VARIANCE (ANOVA)

In addition to multiple regression analysis, statistical techniques like analysis of variance and independent sample t-test were employed to examine the effectiveness of the following school, teacher and pupil related variables on achievement of students in EVS, Mathematics and Language.

Table 37: Mid-day meal scheme and achievement in EVS, Mathematics and Language

Mid-day meal	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Scheme in operation	3140	51.33	18.41	46.92	18.69	58.84	14.82
Not in operation	1647	48.23	18.09	45.03	18.85	57.59	15.25
Total	4787	50.27	18.36	46.27	18.77	58.41	14.98
CR Value		5.556		3.311		2.749	
Level of significant		0.01		0.01		0.01	

Table No. 37 demonstrates that mid-day meal scheme had a significant influence on the achievement of students in all three subjects. Further, students' performance improved when the schools involved in mid-day meal scheme.

Table 38: Teacher Assigning Homework and Achievement of Students in EVS, Mathematics and Language

Assigning Homework	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Regularly	9270	51.08	18.32	47.70	18.90	59.37	14.59
Sometimes	1478	48.20	17.65	43.71	18.02	56.79	15.16
Not at all	48	45.77	15.51	41.71	17.50	54.54	15.16
Total	10796	50.66	18.25	46.85	18.82	58.99	14.70
F Value		17.681		26.162		21.820	
Level of Significance		0.01		0.01		0.01	

Table 38 indicates that homework given by the teacher played a significant role in achievement of students in all the three subjects. It can be inferred that students performance improves when they were given regular homework in EVS, Mathematics and Language.

Table 39: Teacher using Teacher's Dairy and achievement of Students in EVS, Mathematics and Language.

Using of Teacher's Dairy	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Yes	8107	51.31	18.33	47.48	18.84	59.30	14.70
No	2689	48.71	17.87	44.97	18.63	58.06	14.67
Total	10796	50.66	18.25	46.85	18.82	58.99	14.70
CR Value		17.681		26.162		21.820	
Level of Significance		0.01		0.01		0.01	

Table 39 value reveals that maintenance of dairy by teacher helps the students in improving their performance. It can be inferred from the above table that using of teacher's dairy had a significant impact on achievement in all three subjects.

Table 40: Mean Achievement in EVS, Mathematics and Language, F Statistic and probability of significance in different groups of educational level of Father.

Fathers' Education	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Illiterate	15601	48.64	20.92	45.18	21.21	55.69	18.51
Up to Primary	25043	49.94	20.89	45.82	21.34	57.90	18.16
Secondary/Sr. Secondary	35690	50.48	20.28	46.69	20.96	59.84	18.00
Degree and above	4829	57.30	20.41	54.75	22.51	67.30	17.72
Total	81163	50.36	20.69	46.61	21.33	58.89	18.32
F Value		222.66		272.17		566.02	
Level of Significance		0.01		0.01		0.01	

Table 41: Mean Achievement in EVS, mathematics and Language, F Statistic and probability of significance in different groups of educational level of Mother.

Mother Education	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Illiterate	34504	49.09	21.18	45.56	21.29	56.27	18.68
Up to Primary	24834	50.53	20.64	46.65	21.34	59.24	17.85
Secondary/Sr. Secondary	21055	51.33	19.65	47.12	20.88	61.64	17.47
Degree and above	1658	61.58	19.57	59.83	22.92	71.95	16.90
Total	82051	50.35	20.68	46.58	21.33	58.86	18.32
F Value		223.90		246.36		694.54	
Level of Significance		0.01		0.01		0.01	

Tables 40 and 41 demonstrate that there was significant difference among the mean achievement of students belong to different groups of educational status of Fathers and Mothers in all three subjects. Further, the children of parents having degree and above qualifications were performed better than other groups. Hence parents' education played a significant role in achievement of students in all three subjects.

Table 42: Mean Achievement in EVS, Mathematics and Language, F Statistic and Probability of Significance in different Groups of Father Occupation

Fathers' Education	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Daily Wager	21609	48.07	20.47	44.00	20.86	56.98	18.16
Skilled/Clerical worker	16585	49.63	20.12	46.37	21.01	59.60	18.08
Farmer	20719	50.62	21.04	46.85	21.32	56.99	18.27
Shopkeeper/Businessman	9947	51.05	20.50	48.25	21.45	60.29	17.80
Professional	4552	54.43	19.90	51.25	21.78	63.96	17.91
Household	2992	61.94	20.12	53.76	23.24	67.88	18.41
Total	76404	50.41	20.70	46.65	21.38	58.82	18.31
F Value		157.28		160.22		248.85	
Level of Significance		0.01		0.01		0.01	

Table 43: Mean Achievement in EVS, Mathematics and Language, F Statistic and Probability of significance in different Groups of Mother Occupation.

Mother Occupation	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Housewives	59935	49.47	20.55	46.41	21.18	58.11	18.13
Daily Wager	12616	49.78	20.65	44.71	21.00	58.61	18.35
Farmer	4595	52.44	20.94	47.45	21.31	58.48	18.40
Skilled/Clerical worker	3430	56.15	20.06	49.20	21.70	64.96	18.04
Shopkeeper/Businessman	1442	55.00	21.01	49.17	22.77	63.64	18.30
Professional	915	57.53	19.27	53.24	22.35	67.64	16.97
Total	82933	50.14	20.64	46.44	21.26	58.69	18.26
F Value		107.76		50.24		134.59	
Level of Significance		0.01		0.01		0.01	

Table 42 and 43 reveal that there was significant difference among the mean achievement of students in different occupational groups of parents in EVS, mathematics and Language. Further, students from household and professional fathers performed better than rest of the groups in all three subjects.

Table 44. Mean Achievement in EVS, Mathematics and Language, F Statistics and Probability of Significance in different Groups of age of Students.

Age of Student (Years)	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
9	4352	52.08	20.72	48.27	21.60	60.95	18.30
10	27144	51.72	20.61	47.47	21.71	60.65	18.32
11	30043	50.27	20.73	46.91	21.42	58.77	18.48
12	17483	48.95	20.68	45.39	20.78	57.33	18.04
13	6149	48.19	20.42	44.12	20.30	56.61	17.53
14	2363	47.74	19.98	43.32	20.06	55.43	17.23
15	737	45.74	18.28	40.59	18.22	51.09	16.07
Total	88271	50.29	20.67	46.51	21.30	58.88	18.30
F Value		62.257		55.286		125.699	
Level of Significance		0.01		0.01		0.01	

Table 44 indicates that age of the students played a significant role in students' achievement in all three subjects. Further, it can be inferred from the table value that the students of younger age group performed significantly better and the achievement gradually declined as the age of student's progresses. And this trend was true for all three subjects.

Table 45: Frequency of Test and achievement of students in EVS, Mathematics and Language

Frequency of Test	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Never	328	45.91	18.47	41.77	15.77	55.37	16.67
Once in a year	3343	46.15	21.69	43.44	21.48	54.58	19.05
Once in a term	38406	48.51	20.35	45.16	21.00	58.18	18.24
Once in a month	46194	52.11	20.69	47.86	21.47	59.77	18.22
Total	88271	50.29	20.67	46.51	21.30	58.88	18.30
F Value		266.00		140.44		121.32	
Level of Significance		0.01		0.01		0.01	

Table 45 value indicates that frequency of examination had a positive influence on the achievement of the students in EVS, Mathematics and Language. Students scored better when there was an examination once in a month. this trend was true for all the three subjects.

Table 46: Influence of Family help in Achievement of students in EVS, Math and Language

Family Help in Schooling related activities	N	EVS		Mathematics		Language	
		M%	SD	M%	SD	M%	SD
Yes	618 14	50.92	20.62	47.25	21.49	59.73	18.11
No	264 57	48.83	20.71	44.76	20.75	56.84	18.55
Total	882 71	50.29	20.67	46.51	21.30	58.88	18.30
CR Value		13.759		15.916		21.547	
Level of Significance		0.01		0.01		0.01	

Table 46 demonstrates that students performed significantly better in EVS, Mathematics and Language when they were helped by family members regarding their lessons and schooling related activities in all three subjects.

MAJOR FINDINGS

- School bell, black board, chalk & duster and chairs for teachers were available in more than 90% schools
- Safe drinking facility was available in approximately 73% schools.
- Separate toilet for girls were available in less than 40% schools.
- Computer and TV were available between 8% to 16% schools.
- Competency based textbooks, workbooks, teachers' handbooks and teaching aids were available in less than 25% schools.
- More students were getting the benefit of mid day meal scheme as compared to rest of the schemes implemented in the states.
- Average number of working days in schools in states/UTs were approximately 213 with seven periods of 40 minutes each.

- In rural areas more than 65% schools were having Village Education Committees.
- Percentage of female teachers was twice more than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Average pupil teacher ratio was 39:1 which was almost same in both urban and rural areas.
- Approximately 62% teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted on 'Competency Based Teaching-learning and minimum on 'Use of Instructional Material' during last three years. Majority of training programmes were conducted by DIETs.
- Approximately 50% of the teachers had not attended any in-service training programme during last three years.
- In most of cases teachers were getting assistance from 'Head of the School'.
- The educational qualification of fathers was higher than mothers.
- Both boys and girls were getting more academic assistance from father than other family members.
- Girls were getting better academic assistance than boys in both rural and urban areas.
- Approximately 90% students were attending schools more than 70% of working days and less than 4% students were attending schools less than 60% of the total working days.
- In rural areas, boys performed significantly better than girls in all the three subjects whereas in urban areas, girls performed significantly better than boys in Language only
- In all the three subjects, students of Others category performed significantly better than both SC and ST students.
- Within each category, boys performed significantly better than girls in EVS and Mathematics. However in Language, SC boys performed significantly better than girls.
- In all the three subjects, in each category, except in Mathematics in ST category, the urban students performed significantly better than rural students. In Mathematics, there was no significant difference in achievement between rural and urban students.
- Within Language the achievement in Grammar and Usage was higher than Reading Comprehension.
- In EVS and Language, ST students performed significantly better than SC students and in Mathematics SC performed better than ST students.
- Achievement of students was better in Grammar and Usage than Reading Comprehension.
- The Manipur students scored the highest by topped the list by crossing 73% mark in all the three subjects.
- Four states crossed 60% mark in achievement and three states had average achievement below 40% in EVS.
- Three states crossed 60% mark in achievement in Mathematics

- In eight states, the average score was less than 40% in Mathematics.
- Twelve states crossed 60% mark and three states i.e. Manipur, Tamil Nadu and West Bengal crossed 70% mark in achievement in Language.
- 3 to 4% of students scored between 90 to 100% in all the three subjects.
- More number of working days in a year and longer teaching hours in school increased the learning achievement of students in all the three subjects.
- The availability of competency based workbook, teaching aids, participation of community, physical facilities in school helped the children in improving their achievement in the three subjects.
- Use of teaching aids and teaching style of teachers, academic help from senior colleagues of school organization to teachers and teacher's qualification also helped the children in improving their skills in all the three subjects.
- Active involvement of teachers in school and that of family members at home and the regularity in attending the school helped the children in enhancing their achievement in the three subjects.



Part-III



ANDHRA PRADESH

INTRODUCTION

The Government of Andhra Pradesh believes that outlays on education are an investment for future. The goal of the state is to achieve literacy level up to 95 per cent before 2005. As per educational statistics (2001-2002), the number of Primary Schools in the state was 32,556 in 1956 which has increased to 63,362 in the year 2002. Enrolment of students has increased almost three times from 28.05 per cent in 1960 to 86.26 per cent in 2002. The number of teachers also got enhanced by about 2.25 times, from 77,246 in 1956 to 1,73,731 teachers in 2002.

The accessibility to schools in terms of population is upto 97 per cent at primary level. The enrolment and literacy rates of females are lower than males. A primary school is mostly within a distance of 1 km. from the residence for every child. All primary schools in the state have Classes from I to V. All schools need to function for 5 hours a day for a minimum 220 days an academic year. At the primary level, students are exposed to four academic subjects i.e., Mother tongue (Telugu/Urdu), Mathematics, Environmental Studies I and II i.e., Social Studies, Science and also four other activity-based subject areas viz., Work Education, Art Education, Value Education and Health and Physical Education.



Government of Andhra Pradesh has concentrated putting efforts on universal access, enrolment and retention in primary education. It has achieved universal access target successfully and now the stress is on the quality aspect. As per A.P. Education Act, 1998, school committees were constituted with the active participation of community members, which paved the way for attaining targets in universal enrolment and retention.

Persons having D. Ed. (2 years) i.e., Diploma in Education course offered through District Institutes of Education and Training are qualified to teach primary classes.

In the area of Evaluation, Govt. of Andhra Pradesh stresses the importance on continuous and comprehensive evaluation. At primary stage the students are subjected to both oral and written testing.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total 156 schools were sampled from Cuddapa, Hyderabad, Medak and Nellore districts of Andhra Pradesh. Out of total sampled schools, 50 schools were from Cuddapha, 45 from Hyderabad, 47 from Medak and remaining 14 from Nellore district. Areawise and managementwise distribution of schools is shown in the Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt. Aided Schools		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	77	15	19.48	29	37.66	33	42.86
Urban	79	52	65.82	8	10.13	19	24.05
Total	156	67	42.95	37	23.72	52	33.33

Teachers

A total of 329 teachers were sampled from 156 sampled schools. Out of 329 teachers, 181 were males teachers and 148 were females teachers. Areawise 166 teachers were from rural areas and 163 teachers were from urban areas. The distribution is given in Table 2.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers
Category of Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	10	8.77	39	34.21	21	18.42	44	38.6	114
	Female	6	11.54	10	19.23	10	19.23	26	50	52
	Total	16	9.64	49	29.52	31	18.67	70	42.17	166
Urban	Male	4	5.97	22	32.84	10	14.93	31	46.27	67
	Female	14	14.58	22	22.92	8	8.33	52	54.17	96
	Total	18	11.04	44	26.99	18	11.04	83	50.92	163
Total	Male	14	7.73	61	33.7	31	17.13	75	41.44	181
	Female	20	13.51	32	21.62	18	12.16	78	52.7	148
	Total	34	10.33	93	28.27	49	14.89	153	46.5	329

Table 2 shows that the percentage of female teachers was higher than male teachers in case of SC and Others category.

Students

A total number of 2,333 students appeared in each of the three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Cuddapha	Rural	154	147	301
	Urban	196	192	388
	Total	350	339	689
Hyderabad	Rural	11	10	21
	Urban	301	421	722
	Total	312	431	743
Medak	Rural	275	291	566
	Urban	57	54	111
	Total	332	345	677
Nellore	Rural	55	40	95
	Urban	58	71	129
	Total	113	111	224
Total	Rural	495	488	983
	Urban	612	738	1350
	Total	1107	1226	2333

Out of 2,333 students, 983 students were from rural areas and remaining 1,350 students were from urban areas. Out of the total sample, 1,107 were boys and 1,226 were girls students. Hyderabad being an urban district, data of only 21 students could be collected from rural areas.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre-Primary Classes Attached		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	34	44.16	57	74.03	17	22.08	3	3.9
Urban	10	12.66	40	50.63	21	26.58	18	22.78
Total	44	28.21	97	62.18	38	24.36	21	13.46

Table 4 indicates that out of 77 rural sampled schools, pre-primary schools were attached with 34 schools, (about 50 per cent) whereas in urban areas, out of 79 sampled schools, pre-primary schools were attached with only 10 schools. Further, 74 per cent schools of rural areas and approximately 51 per cent schools in urban areas were only primary schools. The percentage of primary schools attached with elementary and secondary stage was 24 per cent and 14 per cent respectively.

Facilities related to teaching-learning process

It was observed that in more than 50 per cent schools play material and toys, games equipment, primary science kit, maths kit and children's books were available to facilitate teaching-learning process. Besides, maps, globes and charts were available in more than 76 per cent schools. However, mini tool kit, reference books, dictionaries, and encyclopedia were available in less than 50 per cent schools. Further, magazines, journals and newspapers were available only in one-third of the total sampled schools.

Infrastructural facilities

It was observed that black boards were available almost in all schools (99 per cent) but musical instruments were available in only one fourth of schools (26 per cent). School bell, chairs for teachers, chalk and duster were available in more than 90 per cent schools. However water pitcher, ladel and glasses were available in less than 50 per cent schools. Besides, tables for teachers, pin up board/notice board, play ground and dustbins were available in more than 50 per cent schools.

Ancillary Facilities

Computers were available in only 5 per cent schools. Annual medical check-up facility for children was available in 65 per cent schools. Further, safe drinking water, immunisation and first-aid kit facilities were available in more than 61 per cent schools. However, separate toilet for girls were available in only 29 per cent schools.

Competency-based Teaching Materials

Information gathered shows that the competency-based textbooks (44.23 per cent) as compared to workbooks (32.05 per cent), teachers' handbook (27.56 per cent) and teaching aids (34.62 per cent), were available in more schools upto the year 2001.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5 Number of Children Receiving Facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	2369	2851	685	517	3783	5417	1782	1726	8619	10511
	%	27.49	27.12	07.95	4.92	43.89	51.54	20.67	16.42	100	100
Free uniform	N	77	174	11	11	74	105	201	97	363	387
	%	21.21	44.96	03.03	2.84	20.39	27.13	55.37	25.07	100	100
Free textbooks	N	3881	4015	893	724	5842	6437	2690	1951	13306	13127
	%	29.17	30.59	06.71	05.51	43.91	49.04	20.21	14.86	100	100
Scholarship for regular attendance	N	209	259	17	26	72	202	12	91	310	578
	%	67.42	44.81	05.48	04.50	23.25	34.95	03.85	15.74	100	100
Other Schemes	N	452	474	95	89	672	722	105	199	1324	1484
	%	34.14	31.94	7.18	06.00	50.76	48.65	07.92	13.41	100	100

Various incentive schemes like, mid-day meal, free uniform, free textbooks, scholarship for regular attendance, etc., were available to both boys and girls across the categories. In case of mid-day meal boys (43.89 per cent) and girls (51.54 per cent) from OBC category were benefited. Likewise, free textbooks and other schemes were most accessible to both boys and girls of OBC category. However, in case of free uniform girls from SC category and boys from Others category were mostly benefited. But, both boys and girls from SC category avail of maximum benefit from scholarship given for regular attendance.

Instructional time

Average number of working days in schools was approximately 216. On an average, schools were having 7 periods in a day of approximately 44 minutes duration.

Educational Committees

The data given in the Table 7 reveals that out of total 156 schools, 92 (59 per cent) schools were having Village Education Committees (VEC). School Management Committees were there in 146 (94 per cent) schools. Further, VEC and SMC were found more in schools located in rural areas than schools in urban areas. However, PTA was more in urban schools than rural schools. Parent-Teacher Association (PTA) was found in 137 (88 per cent) schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	60	32	92
	%	65.22	34.78	100
AEC*	N	0	0	0
	%	0	0	0
SMC	N	75	71	146
	%	51.40	48.60	100
PTA	N	64	73	137
	%	46.71	53.29	100

** No Area Education committees (AEC) were there in Andhra Pradesh.*

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled school	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	77	215	63.61	123	36.39	338	4	38
Urban	79	143	30.49	326	69.51	469	6	38
Total	156	358	44.36	449	55.64	807	5	38

Table 7 shows that overall number of female teachers was more than male teachers. Though the number of male teachers in rural areas was more than female teachers. The average number of teachers per school in rural and urban area was between 4 and 6 per cent. Pupil teacher ratio was 38:1 approximately.

Educational Qualification

Table 8 shows that the percentage of male and female teachers holding PG degree was almost same. More than 50 per cent teachers were graduates. However, 1.22 per cent teachers had qualification below Class X.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	1	0.55	6	3.31	32	17.68	100	55.25	42	23.2	181
Female	3	2.03	11	7.43	25	16.89	74	50	35	23.65	148
Total	4	1.22	17	5.17	57	17.33	174	52.89	77	23.4	329

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level upto which they had studied Mathematics, Science, Language and Social Science.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	1	0.55	103	56.91	37	20.44	40	22.1	181
	Female	5	3.38	104	70.27	21	14.19	18	12.16	148
	Total	6	1.82	207	62.92	58	17.63	58	17.63	329
Science	Male	3	1.66	62	34.25	38	20.99	78	43.09	181
	Female	6	4.05	61	41.22	37	25	44	29.73	148
	Total	9	2.74	123	37.39	75	22.8	122	37.08	329
Language	Male	1	0.55	17	9.39	38	20.99	125	69.06	181
	Female	3	2.03	25	16.89	37	25	83	56.08	148
	Total	4	1.22	42	12.77	75	22.8	208	63.22	329
Social Science	Male	0	0	93	51.38	32	17.68	56	30.94	181
	Female	7	4.73	71	47.97	21	14.19	49	33.11	148
	Total	7	2.13	164	49.85	53	16.11	105	31.91	329

The data reveals that in EVS, Mathematics, Science and Language the percentage of male teachers who studied these subjects upto degree level was more than female teachers. This trend was reverse in case of Social Science. The number of female teachers having secondary qualification was higher than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed
156	Male	66	110	6
	Female	56	83	3
	Total	122	193	9

The majority of sampled teachers were B.Ed. degree holders and very few teachers had M.Ed. degree.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. Teachers' guide, dictionary and other teaching aids were better available to teachers teaching in urban schools than teachers teaching in rural schools. In contrast to this, maps, globe, charts, flash cards, science kit and mathematics kit were more available to rural school teachers than their counterparts in urban areas.

In-service Training

The account of in-service training programmes organised by various agencies for in-service teachers during the year 1999-2002. The number of sampled teachers who attended various programmes are presented in Table 11.

Table 11: Inservice Training Programmes

Organisers who provided training		No. of Teachers out of sampled attended
1. School Complex	N	6
	%	1.80
2. Mandal Resource Centre	N	169
	%	51.37
3. Teacher Resource Centre	N	23
	%	7.00
4. Cluster Resource Centre	N	8
	%	2.40
5. DIET	N	35
	%	10.64
6. SCERT	N	8
	%	2.40
7. Others	N	20
	%	6.08

The in-service training programmes were organised by the various institutions in the districts during last three years and teachers from both urban and rural areas attended the same. Maximum number of teachers attended the programmes conducted by Mandal Resource Centre and minimum teachers attended the programmes organised by School Complex.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	48
2. Content Enrichment	46
3. Production of Instructional Material	31
4. Use of Instructional Material	16
5. Assessment of Pupil Learning	148
6. Competency based Teaching Learning	33
7. Activity based Joyful Learning	42
8. Others	45

During in-service training programme number of themes were covered i.e., content enrichment, production of instructional material and use of instructional material, assessment of pupil's learning etc. The maximum number of programmes were organised on the theme 'Assessment of Pupil's Learning'.

The effectiveness of various training programme is given in Table 13.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	165	126	125	112
	%	74.32	56.75	56.31	50.45
Average	N	54	90	89	105
	%	24.52	40.54	40.09	47.29
Low	N	3	6	8	5
	%	2.22	3.04	3.60	2.25

It is evident that 74 per cent for teachers training programmes were highly effective in terms of utility of knowledge. However, impact of these training programme was rated as average by 40 per cent to 47 per cent teachers in different subjects. The improvement in teaching skills in all subjects was also high due to these training programmes.

Out of 329 sampled teachers, 107 teachers were without any in-service training during last three years. Percentage of male and female teachers who have not attended any in-service training programme was 24.8 per cent and 41.89 per cent respectively. The percentage of teachers without in-service training was more in urban areas (44.17 per cent) than rural areas (21.08 per cent). Further, per cent of male teachers without in-service training was more in rural areas whereas in urban areas percentage of female teachers was more.

Academic Assistance received from various Sources

In the state various committees have been constituted to provide assistance to teachers to improve quality education. Most of the teachers were getting assistance from Head of the school and other teachers, sometimes Mandal Education officer (MEO) and Mandal Resource Cenrs (MRC) also provided help.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for 85 per cent students in the schools was same as the Language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14. The table indicates that approximately one third (31.63 per cent) fathers and more than half (58.08 per cent) mothers of the students were illiterate. Only 3.51 per cent fathers and 0.04 per cent mothers were having degree or higher educational qualification. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Table 14: Educational Levels of Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	62	2.66	54	2.31
Illiterate	738	31.63	1355	58.08
Literate	219	9.39	178	7.62
Primary	478	20.49	344	14.74
Secondary	625	26.79	341	14.61
Sr. Secondary	62	2.66	18	0.07
Degree and above	82	3.51	10	0.04
Donot know/cannot say	67	2.87	33	1.41

Occupation of Parents

Information regarding occupation of father and mother of the students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	Total	R	U	Total
Not Applicable	35	61	96	17	43	60
Household/ Housewife	4	14	18	384	647	1031
Farmer	424	82	506	140	18	158
Poultry farming	1	2	3	0	0	0
Agricultural labour	159	74	233	333	94	427
Picking forest produce	3	0	3	0	2	2
Domestic Servant	1	7	8	18	168	186
Street Vender	33	101	134	2	37	39
Manual unskilled worker	75	269	344	39	109	148
Skilled worker	89	356	445	12	109	121
Clerical worker	20	69	89	4	12	16
Shopkeeper	29	70	99	8	24	32
Employer	70	163	233	12	48	60
Manager/Senior Officer	0	5	5	0	2	2
Others	40	77	117	14	37	51

In rural areas majority of mothers were house wives and fathers were farmers. Likewise in urban areas also, majority of mothers were house wives but fathers were skilled workers. Only a few fathers and mothers were Managers/Senior officers in urban areas. In decreasing order, fathers were working as farmer, skilled worker, manual unskilled worker, agricultural labour and employer, and other etc. Similarly in decreasing order mothers worked as house hold/house wife, agricultural labour, domestic servant, farmer, manual unskilled worker and skilled worker etc.

Academic Assistance

The information collected from the students regarding academic assistance they were getting have been analysed and presented in Table 16.

The percentage of girls both in rural and urban areas get more help than boys from the family members. The maximum contribution is from father/guardian followed by elder brother/sister and then mother. This trend is observed in both rural and urban areas in all groups.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	177	193	252	368	429	561
	%	35.76	39.55	41.18	49.86	38.75	45.76
Mother	N	90	113	186	246	276	359
	%	18.18	23.16	30.39	33.33	24.93	29.28
Elder Brother/Sister	N	201	206	280	353	481	559
	%	40.61	42.21	45.75	47.83	43.45	45.6
Others	N	81	94	116	177	197	271
	%	16.36	19.26	18.95	23.98	17.8	22.1

Attendance

Attendance plays an important role in learning. It is observed that the percentage of girls having attendance more than 80 per cent was higher than boys both in rural and urban areas. Overall, 89 per cent or more students were attending schools on 80 per cent and above working days. The percentage of boys and girls having attendance less than 50 per cent is about 2 per cent.

STUDENTS ACHIEVEMENT

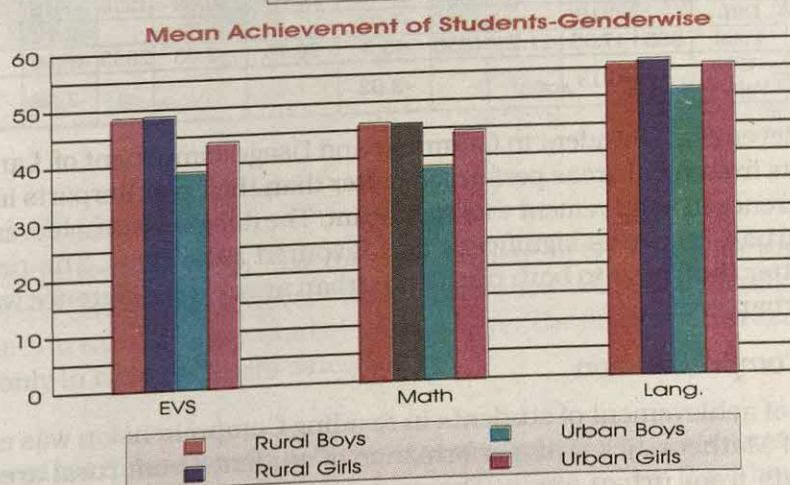
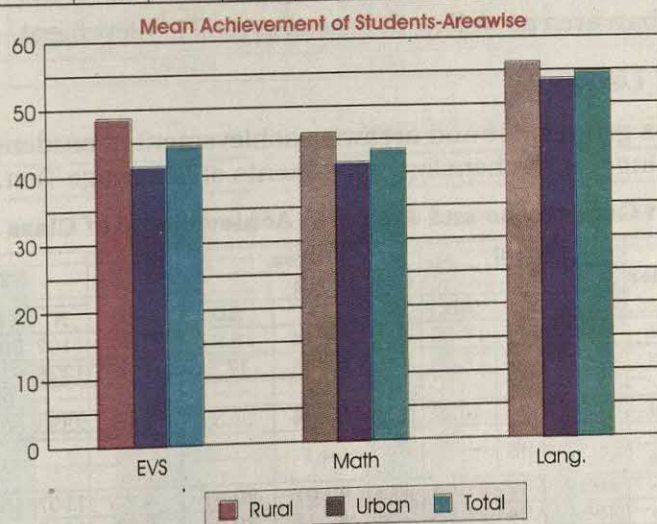
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language monitored through achievement tests administered during the conduct of achievement survey in the year 2002 in Andhra Pradesh. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students, areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	495	48.64	20.73	612	38.78	18	-9.86	1107	43.19	19.88	-8.34
	Girls	488	48.83	20.54	738	43.87	20.19	-4.96	1226	45.84	20.47	-4.17
	Diff.		-0.19			-5.09				-2.65		
	Total	983	48.73	20.63	1350	41.56	19.39	-7.17	2333	44.58	20.23	-8.5
	CR Value		-0.14			-4.89				-3.17		
Mathe- matics	Boys	495	46.22	20.39	612	38.25	19.13	-7.97	1107	41.81	20.09	-6.65
	Girls	488	45.98	20.59	738	44.5	22.31	-1.48	1226	45.09	21.64	-1.19
	Diff.		0.24			-6.25				-3.28		
	Total	983	46.1	20.48	1350	41.66	21.15	-4.44	2333	43.53	20.98	-5.1
	CR Value		0.18			-5.54				-3.8		
Language	Boys	495	55.97	17.7	612	51.43	16.15	-4.54	1107	53.46	17	-4.41
	Girls	488	56.6	17.31	738	55.7	16.99	-0.9	1226	56.06	17.12	-0.9
	Diff.		-0.63			-4.27				-2.6		
	Total	983	56.29	17.5	1350	53.76	16.75	-2.53	2333	54.83	17.11	-3.51
	CR Value		-0.56			-4.72				-3.68		



Environmental Studies

The data reveals that girls performed better than boys in both rural and urban areas. However, the difference was significant only in urban areas. The performance of both rural boys and girls was better than their urban counterparts and the difference was significant.

Mathematics

The data shows that performance of rural students was better than urban students and the difference was significant. The achievement of rural boys and girls was more than their counterparts in urban areas and the difference was significant in case of boys. In rural areas, performance of boys was better than girls but it was not significant. In urban areas girls, performed better than boys and the difference was significant.

Language

The data reveals that performance of rural students was better than urban students and the difference was significant. The achievement of girls was better than boys across the area and within the area. The difference in achievement between boys and girls was significant in urban area as well as in case of overall achievement.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise Achievement of Class V Students

Subject	Gen-der	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	495	61.11	18.26	612	56.44	16.81	-4.67	1107	58.53	17.62	-4.38
	Girls	488	62.22	17.33	738	60.84	17.5	-1.38	1226	61.39	17.44	-1.36
	Diff.		-1.11			-4.4				-2.86		
	Total	983	61.66	17.8	1350	58.84	17.32	-2.82	2333	60.03	17.58	-3.82
	CR Value		-0.98			-4.7				-3.93		
Comp- rehen- sion	Boys	495	47.42	21.05	612	43.07	20.47	-4.35	1107	45.02	20.83	-3.46
	Girls	488	47.24	21.55	738	47.15	20.81	-0.09	1226	47.18	21.1	-0.07
	Diff.		0.18			-4.08				-2.16		
	Total	983	47.33	21.29	1350	45.3	20.75	-2.03	2333	46.16	21	-2.3
	CR Value		0.13			-3.62				-2.49		

The achievement of student in Grammar and Usage component of Language shows that students from rural areas performed better than their counterparts in urban areas and the difference in achievement was significant. The difference in achievement between rural and urban boys was significant and favoured rural boys. The performance of girls was better than boys in both rural and urban areas and difference was significant in case of urban area.

Reading Comprehension

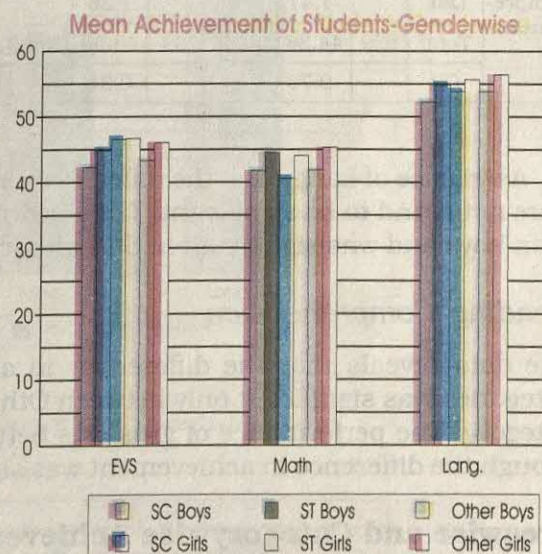
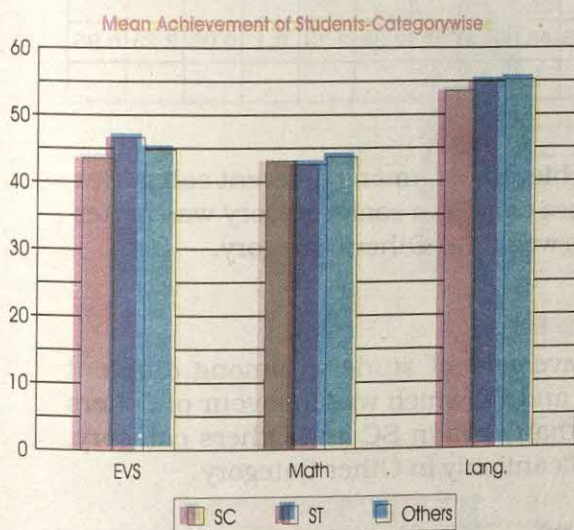
The pattern of achievement of students in Reading Comprehension was exactly similar as in case of Mathematics. The performance of students from rural areas was better than students from urban areas. The performance of girls was better than boys in urban areas and the difference was significant.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise Achievement of Class V Students in EVS

Sub- ject	Gen- der	SC (1)			ST (2)			Others (3)			Others vs SC		Others vs ST		ST vs SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	275	42.29	20.66	38	46.58	18.59	794	43.34	19.66	1.05	0.74	-3.24	-1.05	4.29	1.31
	Girls	254	44.87	21.12	51	46.67	21.37	921	46.06	20.25	1.19	0.8	-0.61	-0.2	1.8	0.55
	Diff.		-2.58			-0.09			-2.72							
	Total	529	43.53	20.9	89	46.63	20.12	1715	44.8	20.02	1.27	1.23	-1.83	-0.84	3.1	1.34
	CR		1.42			0.02			2.82							
Mathe- matics	Boys	275	41.75	20.5	38	40.58	21.67	794	41.89	19.89	0.14	0.1	1.31	0.37	-1.17	-0.31
	Girls	254	44.55	21.98	51	44.07	22.8	921	45.29	21.51	0.74	0.48	1.22	0.37	-0.48	-0.14
	Diff.		-2.8			-3.49			-3.4							
	Total	529	43.1	21.25	89	42.58	22.26	1715	43.72	20.84	0.62	0.59	1.14	0.47	-0.52	-0.21
	CR		1.51			0.73			3.40							
Lan- guage	Boys	275	52.26	16.58	38	53.88	15.68	794	53.85	17.21	1.59	1.36	-0.03	-0.01	1.62	0.59
	Girls	254	54.88	14.97	51	55.64	17.64	921	56.41	17.64	1.53	1.39	0.77	0.3	0.76	0.29
	Diff.		-2.62			-1.76			-2.56							
	Total	529	53.52	15.87	89	54.89	16.76	1715	55.23	17.48	1.71	2.11	0.34	0.19	1.37	0.72
	CR		-1.91			-0.50			-3.04							



Environmental Studies

The data given in Table 19 reveals that the achievement of ST students was highest followed by Others Category. However, these difference were not significant. The performance of girls in each category was better than boys. The differences in achievement was significant only in case of Others category.

Mathematics

The data indicates that differences in achievement among different categories were not significant. Among the categories, performance of girls was better than boys in each category. The difference in achievement was significant only in Others' category.

Language

As in case of Mathematics, the differences in achievement among different categories were not found to be significant. The performance of girls was better than boys in each category. The differences in achievement was significant only in the Others category.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	275	57.41	16.94	38	57.79	16.23	794	58.95	17.91	1.54	1.28	1.16	0.43	0.38	0.13
	Girls	254	60.76	15.69	51	61.41	18.48	921	61.56	17.85	0.8	0.7	0.15	0.06	0.65	0.23
	Diff.		-3.35			-3.62			-2.61							
	Total	529	59.02	16.42	89	59.87	17.55	1715	60.35	17.92	1.33	1.59	0.48	0.25	0.85	0.43
	CR		2.36			0.98			3.01							
Reading Comprehension	Boys	275	43.68	21.25	38	47.37	19.9	794	45.37	20.73	1.69	1.14	-2	-0.6	3.69	1.06
	Girls	254	45.09	19.99	51	46.01	20.92	921	47.82	21.39	2.73	1.9	1.81	0.6	0.92	0.29
	Diff.		-1.41			1.36			-2.45							
	Total	529	44.36	20.65	89	46.59	20.39	1715	46.69	21.12	2.33	2.26	0.1	0.05	2.23	0.95
	CR		-0.79			0.31			-2.40							

As in case of Language, the differences in achievement among different categories were not found to be significant. The performance of girls in each category was better than boys and was significant in SC category as well as in Others category.

Reading Comprehension

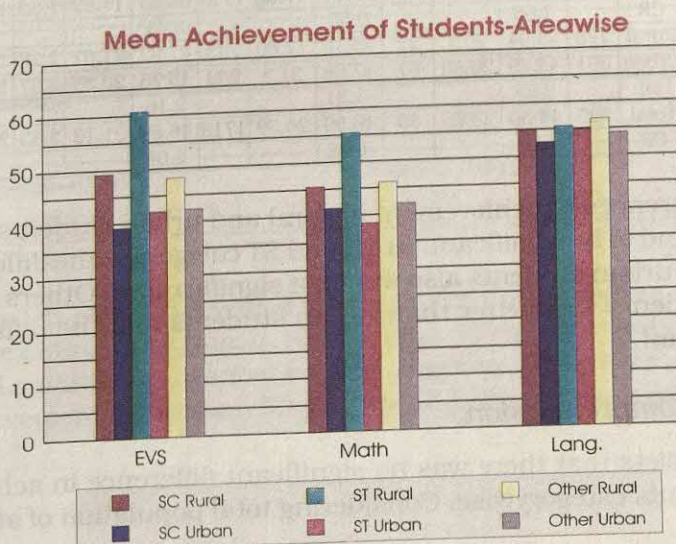
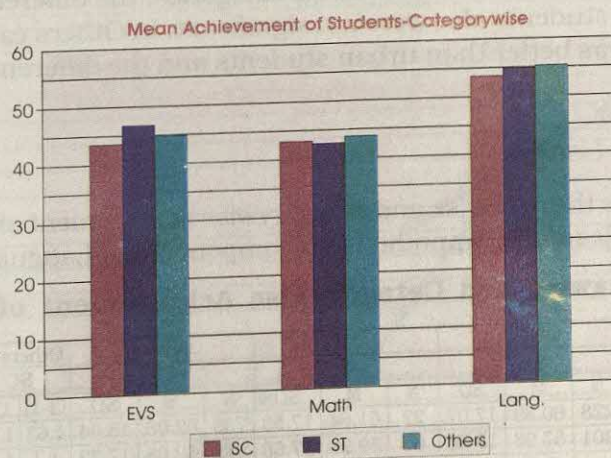
The data reveals that the differences in achievement of students among different categories was significant only between Others and SC which was in favour of Others category. The performance of girls was better than boys in SC and Others category, though the difference in achievement was significant only in Other Category.

Areawise and Categorywise Achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 depicts the areawise and categorywise achievement of Class V students in EVS, Mathematics, Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise Achievement of Class V Students

Sub- ject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	228	49.25	21.37	22	60.68	19.61	733	48.21	20.34	-1.04	-0.65	12.47	-2.94	11.43	2.59
	Urban	301	39.19	19.48	67	42.01	18.16	982	42.26	19.4	3.07	2.39	0.25	0.11	2.82	1.13
	Diff.		10.06			18.67			5.95							
	Total	529	43.53	20.9	89	46.63	20.12	1715	44.8	20.02	1.27	1.23	-1.83	-0.84	3.1	1.34
	CR		5.57			3.94			6.11							
Mathe- matics	Rural	228	45.44	21.33	22	55.26	24.65	733	46.03	20.04	0.59	0.37	-9.23	-1.74	9.82	1.8
	Urban	301	41.32	21.05	67	38.41	19.91	982	41.99	21.26	0.67	0.48	3.58	1.42	-2.91	-1.07
	Diff.		4.12			16.85			4.04							
	Total	529	43.1	21.25	89	42.58	22.26	1715	43.72	20.84	0.62	0.59	1.14	0.47	-0.52	-0.21
	CR		2.21			2.91			4.02							
Langu- age	Rural	228	54.86	16.3	22	55.45	16.31	733	56.76	17.89	1.9	1.5	1.31	0.37	0.59	0.16
	Urban	301	52.51	15.48	67	54.7	17.03	982	54.09	17.1	1.58	1.51	-0.61	-0.28	2.19	0.97
	Diff.		2.35			0.75			2.67							
	Total	529	53.52	15.87	89	54.89	16.76	1715	55.23	17.48	1.71	2.11	0.34	0.19	1.37	0.72
	CR		1.68			0.19			3.12							



Environmental Studies

The data reveals that the performance of ST students of rural areas was better than their counterparts SC and Others category students. The differences in achievement were significant between Others vs ST and ST vs SC and were in favour of ST students. In urban areas, the performance of Others was better than SC and ST category students. The differences in achievement between Others and SC was found to be significant. The achievement of rural students in each category was better than urban students and was significant in each category.

Mathematics

The differences in achievement of rural and urban students of different categories were not found to be significant. The performance of rural students was much better than their counterpart in urban schools and the differences were significant in each category.

Language

The differences in achievement of rural and urban students of different categories were not found to be significant. In SC and ST categories, the differences in achievement of rural and urban students also were not significant. In Others category, performance of rural students was better than urban students and the difference in achievement was significant.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	228	60.39	17.07	22	61.64	17.53	733	62.06	18.04	1.67	1.27	0.42	0.11	1.25	0.32
	Urban	301	57.98	15.86	67	59.28	17.66	982	59.08	17.73	1.1	1.02	-0.2	-0.09	1.3	0.55
	Diff.		2.41			2.36			2.98							
	Total	529	59.02	16.42	89	59.87	17.55	1715	60.35	17.92	1.33	1.59	0.48	0.25	0.85	0.43
	CR		1.66			0.55			3.41							
Reading Comprehension	Rural	228	45.64	20.3	22	45.15	17.69	733	47.92	21.67	2.28	1.46	2.77	0.72	-0.49	-0.12
	Urban	301	43.39	20.88	67	47.06	21.3	982	45.76	20.65	2.37	1.73	-1.3	-0.48	3.67	1.28
	Diff.		2.25			-1.91			2.16							
	Total	529	44.36	20.65	89	46.59	20.39	1715	46.69	21.12	2.33	2.26	0.1	0.05	2.23	0.95
	CR		1.25			-0.42			2.08							

The differences in achievement of rural and urban students of different categories were not found to be significant. In SC and ST categories, the differences in achievement of rural and urban students also were not significant. In Others category, performance of rural students was better than urban students and the difference in achievement was significant.

Reading Comprehension

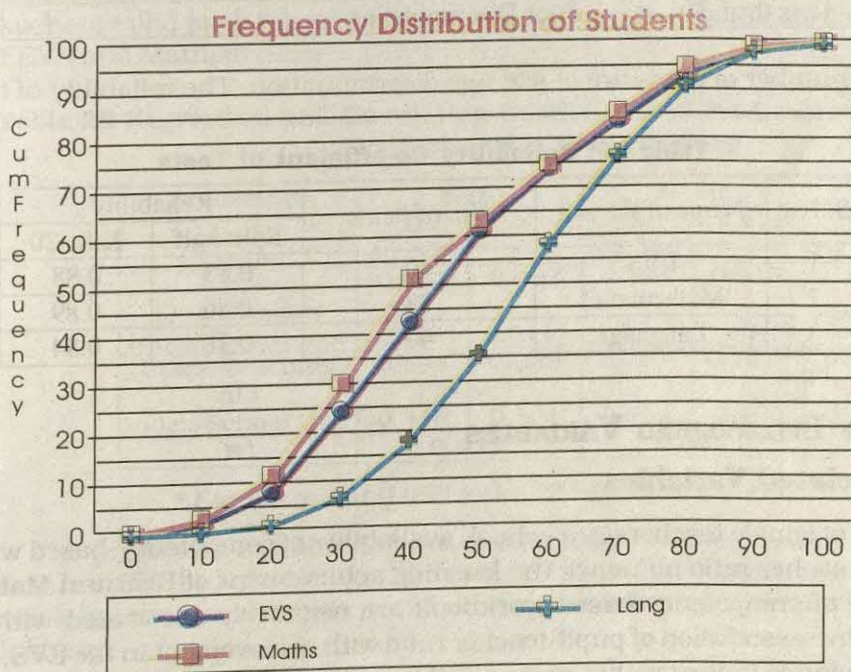
Table 25 depicts that there was no significant difference in achievement of rural and urban students categorywise. Considering total population of students, the difference

in achievement between Others and SC students was found to be significant, favouring students of Others category. In Others category, the performance of rural students was better than urban students and the difference in achievement was significant.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students on the Basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	45	147	382	424	438	299	228	223	126	21
	cf	45	192	574	998	1436	1735	1963	2186	2312	2333
	cf(%)	1.93	8.23	24.60	42.78	61.55	74.37	84.15	93.70	99.10	100
Math	f	66	204	433	499	275	271	252	216	102	15
	cf	66	270	703	1202	1477	1748	2000	2216	2318	2333
	cf(%)	2.83	11.57	30.13	51.52	63.31	74.92	85.73	94.98	99.36	100
Language	f	7	28	126	262	409	536	427	337	176	25
	cf	7	35	161	423	832	1368	1795	2132	2308	2333
	cf(%)	0.30	1.50	6.90	18.13	35.66	58.64	76.94	91.38	98.93	100



The figures posted in Table 23 revealed that in all the three subjects the distribution of scores covered the entire range from 0-100 per cent. The performance in the subjects of EVS, Maths and Language was almost similar. However, there were more number of students with achievement more than 50 per cent in Language as compared to Maths and EVS.

CLASSIFICATION OF TEST ITEMS

The distribution of test items according to the range of facility values is given below:

Table 24: Classification of items according to facility values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	3	3	2
25 to less than 50	Difficult	26	13	26
50 to less than 75	Average	11	19	10
75 to 100	Very Easy	0	5	0

It was found that items related to historical events and general awareness were generally difficult in EVS. In mathematics problem based on fractions were difficult one. In language more number of easy items were there. Performance in grammar and usage was better than reading comprehension.

Table 25: Classification of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	2	0	4
.30 to less than .70	Average Discrimination	36	31	30
Less than .30	Poor Discrimination	2	9	4

A large number of items are of average discrimination. The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.83	0.88
2	Mathematics	38	0.80	0.89
3	Language	40	0.76	0.84

IMPACT OF INTERVENING VARIABLES

School Related Variables

Percentage of female teachers in a school, availability of competency-based workbooks, and pupil-teacher ratio influence the learning achievement of EVS and Mathematics. Availability of competency-based workbook are negatively associated with criterion EVS. Negative association of pupil-teacher ratio with achievement in the EVS, Language and Mathematics indicates that more pupil in a class, poor in the learning.

The predictors explain 6.8 per cent of total variance in EVS, 8.2 per cent in Mathematics and 6.4 per cent in Language, independently.

Only ancillary facilities influence language achievement in schools. It is positively associated with the criterion, indicating children of schools having more ancillary facilities perform better. It also implies that facilities like drinking water, toilet facilities, TV, computer, playground facilities etc. help the children in improving their in all the three subjects.

Table 27: Regression and Co-relation Coefficients of the Predictors of School-related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	61.690	--	76.717	--	62.714	--
PTR	-0.120	-0.0119	-0.095	-0.091	-0.080	-0.053
Com Participation	2.775	0.042	0.378	0.041	1.423	0.013
Teach-aid	0.094	0.013	0.022	0.012	0.063	0.097
Physical facility	0.076	0.011	0.068	0.051	0.021	0.135
Ancillary facility	0.748*	0.182*	0.087*	0.017*	0.011	0.105
Instructional time	0.042	0.223	0.062*	0.181*	0.017*	0.183*
Working day	0.055	0.033	0.020	0.10	0.059*	0.185*
Index-Comp. TLM	1.176*	0.103*	0.017	0.082	-0.018	-0.076
R²	0.068		0.082		0.064	

* Significant at 0.05 level ** Significant at 0.01 level

Teacher Related Variables

By and large teaching experience including training of teachers and teaching aids and teaching style of teachers influence the learning achievement in EVS and Mathematics. Its positive association with the criterion indicates that teachers with higher teaching experience and more training and use of teaching aids enhance the learning achievement of EVS and Mathematics.

Table 28 Regression and Co-relation Coefficients of Predictors of Teacher-related Variables with the Criteria

Predictors	EVS		M th		Language	
	B	r	B	r	B	r
Constant	41.500	--	39.366	--	52.714	--
Index-Qualification	0.032	0.007	0.168	0.012	0.061	0.028
Index-Experience	2.078*	0.011*	1.525*	0.104**	0.291	0.041
Index-Teaching Aid	0.503	0.059	2.013*	0.107*	0.088	0.025
Index-School Org.	0.318	0.101	0.274	0.106	0.276	0.085
R²	0.017		0.021		0.008	

* Significant at 0.05 level ** Significant at 0.01 level

The predictors explain 1.7 per cent of total variance in EVS and 2.1 per cent in Mathematics independently. No variable is found significant with the language indicating that teacher has not made any contribution in improving the language of children.

Pupil Related Variables

The teaching-learning processes i.e., teacher takes class regularly, gives dictation, solves arithmetic problems, gives homework, checks class work and gives frequent class tests and regular attendance of students influence the learning achievement of students in all the three subjects. The positive association of educational status and occupation of parents with the learning achievement in language indicates that the knowledge of parents and teachers helped the children in improving their scores. The negative association of age with the EVS, Mathematics and Language indicates that children of higher age group scores poorly in these subjects.

The predictors explain 3.9 per cent of total variance in EVS, 4.2 per cent in mathematics and 2.5 per cent in Language independently. One can infer from the above analysis that active involvement of teachers in school, sustained teacher's training programmes, use of teaching aids enhanced the achievement of children in schools.

Table 29: Regression and Co-relation Coefficients of Predictors of Pupil-related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	40.924	--	51.679	--	49.541	--
Index-Ed & Occu	0.282	0.018	0.377	0.40	0.816	0.049
Index-Schooling	0.519	0.030	0.945*	0.061**	0.071	0.031
Index-TLP	5.502**	0.155**	5.256**	0.150**	3.310**	0.116**
Age	-0.948	-0.66**	-1.922**	-0.116**	-0.575*	-0.054**
Detention	-0.875*	-0.045*	-0.304	-0.026	-0.175	-0.018
Attendance	0.153**	0.46**	0.133**	0.098**	0.129**	0.099**
R²	0.039		0.042		0.025	

* Significant at 0.05 level ** Significant at 0.01 level

COMPARISON OF ACHIEVEMENT BETWEEN DPEP VS NON-DPEP DISTRICTS

In Andhra Pradesh out of 4 districts, Hyderabad is the only non-DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise Achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	795	46.34	19.64	312	35.16	18.17	-9
	Girls	795	48.55	20.17	431	40.84	20.07	-6.41
	Diff.		-2.21			-5.68		
	Total	1590	47.45	19.93	743	38.46	19.49	-10.31
	CR Value		-2.21			-4.02		
Mathe- matics	Boys	795	45.29	19.5	312	32.95	18.84	-9.71
	Girls	795	47.62	20.61	431	40.43	22.73	-5.46
	Diff.		-2.33			-7.48		
	Total	1590	46.45	20.09	743	37.28	21.49	-9.8
	CR Value		-2.32			-4.89		
Language	Boys	795	55.7	16.56	312	47.76	16.82	-7.1
	Girls	795	57.17	16.05	431	54.02	18.78	-2.95
	Diff.		-1.47			-6.26		
	Total	1590	56.43	16.32	743	51.39	18.23	-6.43
	CR Value		-1.8			-4.77		

The data revealed that in all the three subjects, the achievement of students of both boys and girls, of DPEP districts was significantly better than their counterparts in non-DPEP districts.

HARD SPOT OF LEARNING

EVS

In Andhra Pradesh, items 4, 21 and 23 were correctly responded to by less than 25 per cent students and found very difficult. Content-wise the hard spots are recognised in identification of boundaries with neighbouring countries, knowledge of solar system and planets, etc., and knowledge of composition in air. Likewise, 26 (65 per cent) items were found difficult. Contentwise it was identification of a state on the map and natural feature of the country, climatic conditions at varying attitudes, location of a state, understanding a longitude and latitude, identification of poles, representative of president, judicial function of courts, recognition of first President in a state, system of governance, knowledge of UN days, knowledge of freedom struggle, understanding of eclipse, effect of weather conditions on human bodies, knowledge of soil erosion, pollution free fuel, etc.

Language

In Language items 16, 38, 39 were correctly responded to by less than 25 per cent students. Contentwise it was comprehension of story and 13 (33 per cent) items were found difficult and the hard spots are recognised as vocabulary and structure and comprehension of informal passage and story.

Mathematics

In Mathematics items 23 and 25 were found very difficult. However, 26 (65 per cent) items were found difficult. Contentwise, hard spots were found in ascending and descending order, simplification, division, HCF, measurements of area and commercial Mathematics like unitary method, profit and loss, percentage and geometry.

FINDINGS

Analysis of the results on students' achievement signified that

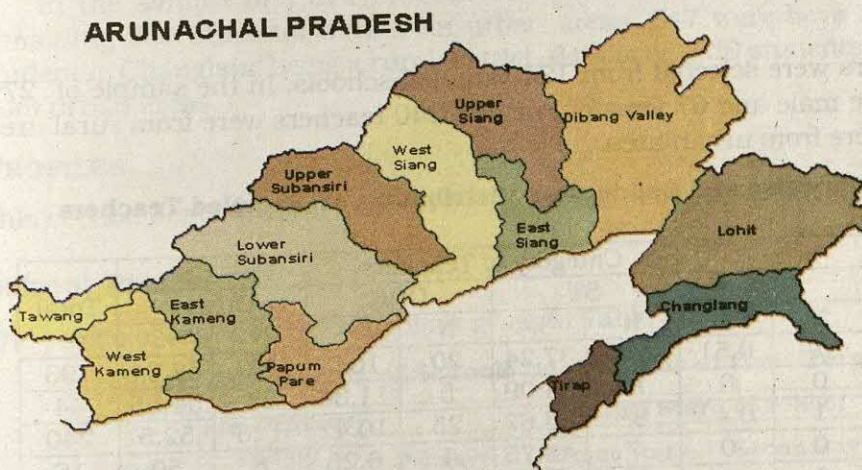
- Maps were found in maximum number of schools.
- Magazines, journal and newspaper were found in minimum number of schools.
- Almost all schools had a school bell.
- Musical instruments were found in nearly one fourth of the total schools.
- Computers were available only in very few schools.
- Separate toilet for girls was available in a limited number of schools.
- Competency-based textbooks were available in more schools than workbooks, teachers' handbooks and teaching aids.
- The number of graduate male teachers was more than graduate female teachers.
- Books other than textbooks were available to all female teachers in rural schools.
- Teaching aids were better available to teachers in rural schools than teachers in urban schools.
- Heads of schools mostly provide assistance to teachers both in rural areas and urban areas.
- More than 50 per cent mothers were illiterate.
- Fathers' educational level was better than mothers.
- Fathers/guardians were providing more academic assistance than others.
- Girls were getting more academic assistance than boys from all groups in both rural, urban and overall population.
- Achievement of students in Language was better than EVS followed by Mathematics.
- Achievement of girls was better than boys across the subjects, areas and also categories.
- Performance of rural students in all the three subjects was better than their counterparts in urban areas.

- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In EVS and Mathematics, achievement of ST students was better than SC and Others.
- In urban areas, there was no significant difference in achievement across the categories.
- Programme of DPEP districts students was significantly better than students of non-DPEP district students in all the three subjects.
- Teachers' experience, training, teaching aids and teachers' regularity contributed in learning
- Teaching learning process, percentage attendance of the pupils were positively associated with the achievement of the students. However, pupil's age, was negatively associated with the achievement of the students.

ARUNACHAL PRADESH

INTRODUCTION

Arunachal Pradesh is situated in the North Eastern part of India. Earlier, Arunachal Pradesh was known as North East Frontier Agency (NEFA). In 1972 its name was changed to Arunachal Pradesh a Union Territory. It got statehood on 20th February, 1987.



History of education starts with two primary schools in 1947. Growth of educational facilities continued to be slow in the area till 1960. Since sixties, there has been a noteworthy achievement in educational development. In sixties number of primary schools in the state were 622 which has increased to 1,339 in 2000-2001. (Selected Educational Statistics, 2001).

Arunachal Pradesh does not have its own policy statement on education. The goals and objectives of education stipulated in National Policy on Education (1968 and 1986) were adopted. CBSE curriculum is prescribed in all schools. English is the medium of instruction for all stages of school education. Out of total habitations of 3,834 primary education facilities exist within 1,436. The other 368 habitations have the same within a distance of 1km.

SAMPLE

The information collected from sampled schools, teachers and students through various tools for the achievement survey has been presented as under:

Schools

A total 124 schools were sampled from Changlang, Tirap and West Kameng districts of Arunachal Pradesh. Out of total sampled schools 40 schools were from Changlang, 41 from Tirap and the remaining 43 schools from West Kameng district. Areawise and Managementwise distribution of schools is shown in the Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	111	111	100	0	0	0	0
Urban	13	13	100	0	0	0	0
Total	124	124	100	0	0	0	0

Teachers

A total 279 teachers were selected from 124 sampled schools. In the sample of 279 teachers, 212 were male and 67 female. Further, 240 teachers were from rural area and 39 teachers were from urban area.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	1	0.51	73	37.24	20	10.2	102	52.04	196
	Female	0	0	15	34.09	5	11.36	24	54.55	44
	Total	1	0.42	88	36.67	25	10.42	126	52.5	240
Urban	Male	0	0	7	43.75	1	6.25	8	50	16
	Female	0	0	12	52.17	2	8.7	9	39.13	23
	Total	0	0	19	48.72	3	7.69	17	43.59	39
Total	Male	1	0.47	80	37.74	21	9.91	110	51.89	212
	Female	0	0	27	40.3	7	10.45	33	49.25	67
	Total	1	0.36	107	38.35	28	10.04	143	51.25	279

Table 2 shows distribution of teachers in different categories. The number of male teachers was higher than female teachers across the categories. In urban areas, the number of female ST and OBC teachers were more than male teachers whereas in rural areas, the trend was reverse.

Students

A total number of 1,571 students appeared in all the three tests i.e., EVS, Language and Mathematics. Table 3 gives an account of the sampled students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Changlang	Rural	256	209	465
	Urban	17	13	30
	Total	273	222	495
Tirap	Rural	220	178	398
	Urban	67	64	131
	Total	287	242	529
West Kameng	Rural	232	196	428
	Urban	55	64	119
	Total	287	260	547
Total	Rural	708	583	1291
	Urban	139	141	280
	Total	847	724	1571

In the sample of 1,571 students, 1,291 students were from rural areas and remaining 280 students were from urban areas, 847 were boys and 724 were girl students. Changlang being a rural district, data of only 30 students could be collected from urban areas.

PROFILES

This section deals with the profiles of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre- Primary School Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Sec	
	N	%	N	%	N	%	N	%	N	%
Rural	68	61.26	72	64.86	25	22.52	8	7.21	6	5.41
Urban	10	76.92	6	46.15	4	30.77	1	7.69	2	15.38
Total	78	62.90	78	62.90	29	23.39	9	7.20	8	6.48

Out of 111 sampled rural schools, pre-primary schools were attached with 68 schools, whereas in urban areas, out of 13 schools, pre-primary schools were attached with 10 schools. Very few secondary and senior secondary school had pre-primary section.

Facilities related to teaching-learning process

It was observed that in more than 50% schools, charts, play materials and toys, maths kits, children's books and reference books, dictionaries encyclopedia, etc., were available. Maps and globes were available in 75% of schools, however, mini tool kits were available

in only 20% schools. Further, magazines, journals and newspapers were available only in 10% schools.

Infrastructural facilities

It was observed that blackboards and school bells were available more than 90% schools. The musical instruments, water pitcher, ladel and glass etc., were available in less than 50% schools. Chairs, tables, chalk, duster were available in 82 - 88% schools. However, pin up board/notice board, play ground and dustbins were available in more than 52 - 59% schools.

Ancillary Facilities

Computer was available in only 4% schools. Annual medical check-up facility, separate toilet for girls, first aid-kit and T.V. were available in 11-17% of schools. Further, safe drinking water, immunisation, electric connection for the school and toilet facilities were available in 39 - 47% schools.

Competency-based Teaching Materials

Information gathered shows that out of 124 schools, competency-based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Teacher's handbook were available in lesser number of schools as compared with remaining. However, workbooks and teaching aids were available in approximately same number of schools.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes in 124 schools.

Table 5: Number of Children receiving Facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	246	268	2067	2101	291	288	1719	1493	4323	4150
	%	5.69	6.46	47.81	50.63	6.73	6.94	39.76	35.98	100	100
Free uniform	N	244	264	418	568	364	264	244	244	1270	1340
	%	19.21	19.70	32.91	42.39	28.66	19.70	19.21	18.21	100	100
Free textbooks	N	225	155	4902	4191	420	314	396	319	5943	4979
	%	3.79	2.61	82.40	70.52	7.07	5.28	6.21	5.37	100	100
Scholarship for regular attendance	N	244	264	308	328	244	264	244	264	1040	1120
	%	23.26	23.57	29.62	29.29	23.46	23.57	23.46	23.57	100	100
Other Schemes	N	224	244	277	274	224	244	224	244	949	1006
	%	23.60	24.25	29.19	27.24	23.60	24.25	23.60	24.25	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. Above mentioned table value indicates that girls (50.63%) from ST category getting maximum benefit from mid-day meal than their counterparts (47.81%). However, this is reverse in case of Others category. In case of free uniform ST girls were also getting more benefit than their counterparts, whereas this trend is same for SC Category and reverse in case of OBC and Others

categories. For free textbooks, it is ST boys (82.40%) who were getting more benefited than their female counterparts (70.52%). However, for scholarship for regular attendance irrespective of category and gender, all were more or less equally benefited.

Instructional time

The average number of working days were about 177. On an average, schools were having seven periods in a day of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 124 schools, 74 (59.68%) schools were having Village Education Committee (VEC). School Management Committee (SMC) was observed in 92 (74.19%) schools and Area Education Committee (AEC) was observed in only 21 (16.94%) schools and Parent Teacher Association (PTA) was observed in only 26 (20.97%) schools. Further except SMC and PTA other committee were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	Total
VEC	N	74	0	74
	%	66.67	0	59.68
AEC	N	19	2	21
	%	17.12	15.38	16.94
SMC	N	82	10	92
	%	73.87	76.92	74.19
PTA	N	20	6	26
	%	18.02	46.15	20.97

Teachers Profile

In this section profile of teachers in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil- Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	111	358	64.62	196	35.38	554	5	35
Urban	13	55	40.74	80	59.26	135	10	33
Total	124	413	59.94	276	40.06	689	6	35

The overall percentage of male teachers were more than female teachers. The percentage of male teachers in rural areas was more than female teachers but it was less than female teachers in urban areas. The average number of teachers per school

in rural and urban area were 5 and 10 respectively. Overall pupil-teachers ratio in the sampled districts was 35:1. However, it was lower in urban schools as compared to rural schools.

Educational Qualification

The data given in Table 8 reveals that the percentage of male and female teachers holding PG degree was 14% and 6% respectively. More than 50% teachers were graduates. However, approximately 1% teachers had qualification below Class X. The percentage of female graduate teachers was more than male graduate teachers.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	3	1.42	14	6.6	49	23.11	117	55.19	29	13.68	212
Female	0	0	2	2.99	17	25.37	44	65.67	4	5.97	67
Total	3	1.08	16	5.73	66	23.66	161	57.71	33	11.83	279

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level upto which they had studied Mathematics, Science, Language and Social Science.

Table 9: The Level upto which subjects studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	16	7.55	151	71.23	27	12.74	18	8.49	212
	Female	5	7.46	50	74.63	8	11.94	4	5.97	67
	Total	21	7.53	201	72.04	35	12.54	22	7.89	279
Science	Male	22	10.38	135	63.68	28	13.21	27	12.74	212
	Female	2	2.99	54	80.6	6	8.96	5	7.46	67
	Total	24	8.6	189	67.74	34	12.19	32	11.47	279
Language (Medium)	Male	12	5.66	27	12.74	78	36.79	95	44.81	212
	Female	4	5.97	3	4.48	19	28.36	41	61.19	67
	Total	16	5.73	30	10.75	97	34.77	136	48.75	279
Social Science	Male	18	8.49	76	35.85	54	25.47	64	30.19	212
	Female	3	4.48	22	32.84	18	26.87	24	35.82	67
	Total	21	7.53	98	35.13	72	25.81	88	31.54	279

The data reveals that in Mathematics, Language and Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. This trend was reverse in case of Language and Social Science. The number of male teachers having qualification below class X according to the level upto which different subjects studied was higher than female teachers in subjects.

Professional Qualification

Distribution of teachers on the basis of their professional qualifications is given in table 10.

Table 10: Teachers according to Professional Qualification

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
124	Male	73	42	0
	Female	23	8	1
	Total	96	50	1

Out of sampled teachers, 73 male teachers and 23 female teachers were diploma certificate holders in primary/elementary education and 42 male and only 8 female teachers were having B.Ed. degree. Only one female teacher was having M.Ed.

Availability of Teaching Aids

It is found that teachers, guide, books other than textbooks, maps, charts, flash cards, mathematics kits and other teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools. In contrast to this, dictionaries, globes, and science kits were more available to rural school teachers than their counterparts in urban areas.

In-service Training

The account of in-service training programmes organised by various agencies for in-service teachers during the last three years presented in Table 11.

Table 11: Inservice Training Programmes

Organisers who provided training		No. of teachers trained
1. School Complex	N	0
	%	0
2. Block Resource Centre	N	2
	%	0.72
3. Teacher Resource Centre	N	4
	%	1.43
4. Cluster Resource Centre	N	4
	%	1.43
5. DIET	N	61
	%	21.86
6. SCERT	N	2
	%	0.72
7. Others	N	1
	%	0.36

The in-service training programmes were organised by various institutions in the state during 2000-2002. Data portrays that maximum 61(21.86%) teachers were trained by DIET and minimum 2(0.72%) each by BRC and SCERT during the given time.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	24
2. Content Enrichment	5
3. Production of Instructional Material	1
4. Use of Instructional Material	1
5. Assessment of Pupil Learning	7
6. Competency based Teaching Learning	24
7. Activity based Joyful Learning	3
8. Others	9

During in-service training programme number of themes were covered i.e., content enrichment, production of instructional material, use of instructional material, assessment of pupil's learning etc. The maximum number of programme were organised on the theme of general training and 'competency-based teaching learning'.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Impact of Training in Improving		
			EVS Teaching Skills	Lang. Teaching Skills	Math Teaching Skills
High	N	14	17	14	14
	%	19.17	23.29	19.17	19.17
Average	N	56	54	53	56
	%	76.71	73.97	72.60	76.71
Low	N	3	2	6	3
	%	4.10	2.74	8.22	4.10

It is evident that 77% training programmes were averagely effective in terms of utility of knowledge. The impact of these training programme was rated as average by approximately 75% teacher in all subjects.

Out of 279 sampled teachers, 206 teachers were without any in-service training during last three years. Percentage of males and female teachers who have not attended any in-service training programme was 72% and 81% respectively. The percentage of both male and female teachers without in-service training was more in urban areas than rural areas.

Academic Assistance received from Various Sources

Most of the teachers were getting assistance from Head of the schools and other teachers. Sometimes help was provided by BEOs as well.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for 98% students in the schools was different from the Language used at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	89	5.66	83	5.28
Illiterate	471	29.88	890	56.65
Literate	162	10.31	114	7.25
Primary	238	15.15	156	9.93
Secondary	345	21.96	213	13.55
Sr. Secondary	122	7.76	57	3.63
Degree and above	121	7.70	38	2.42
Donot know/cannot say	23	1.46	20	1.21

Table 14 indicates that approximately 30% fathers and 57% mothers were illiterate. Only approximately 8% fathers and 2% mothers had degree and above educational qualification. Percentage of parents educated upto secondary level was more than parents educated only upto primary level. Educational level of mothers was poorer than fathers.

Occupation of Parents

Information gathered regarding occupation of fathers and mother of the sampled students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	91	27	118	45	17	62
Household/ Housewife	16	3	19	917	215	1132
Farmer	570	32	602	227	9	236
Poultry farming	2	0	2	1	1	2
Agricultural labour	32	3	35	19	1	20
Picking forest produce	5	0	5	0	0	0
Domestic Servant	6	1	7	1	4	5
Street Vender	1	0	1	1	0	1
Manual unskilled worker	73	12	85	15	2	17
Skilled worker	118	31	149	13	4	0
Clerical worker	45	8	53	8	0	0
Shopkeeper	25	13	38	7	4	11
Employer	125	80	205	21	18	39
Manager/Senior Officer	57	41	98	7	4	11
Others	125	29	154	9	1	10

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas, majority of mothers were also housewives like rural areas, but fathers were employers. Only a few fathers and mothers were poultry farmers, forest produce pickers, domestic servant and street vendor. Father's occupation in decreasing order was farmer, employer, skilled worker, manager/senior officer, manual unskilled worker, clerk, shopkeeper and agricultural labour, etc. Mothers' occupation in decreasing order was housewives, farmer, employer, agricultural labour etc.

Academic Assistance

The information regarding academic assistance has been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	238	206	58	71	296	277
	%	33.62	35.33	41.73	50.35	34.95	38.26
Mother	N	121	93	34	46	155	139
	%	17.09	15.95	24.46	32.62	18.3	19.2
Elder Brother/Sister	N	248	227	56	61	304	288
	%	35.03	38.94	40.29	43.26	35.89	39.78
Others	N	35	21	13	10	48	31
	%	4.94	3.6	9.35	7.09	5.67	4.28

Overall, both boys and girls get more academic assistance from elder brothers/sisters than others and it's true for both boys and girls from rural areas. But, this picture is not the same for boys and girls from urban areas where they get maximum assistance from father/guardian as compared to others.

Attendance

It was observed that the percentage of girls attending school between 90-100% of school days was higher than boys. This was true for both urban and rural areas. However, the percentage of boys attending school between 80-90% of school days was more than girls for both urban and rural areas. Further, more than 90% boys and girls were attending school above 70% of total school working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Arunachal Pradesh. The language test had two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

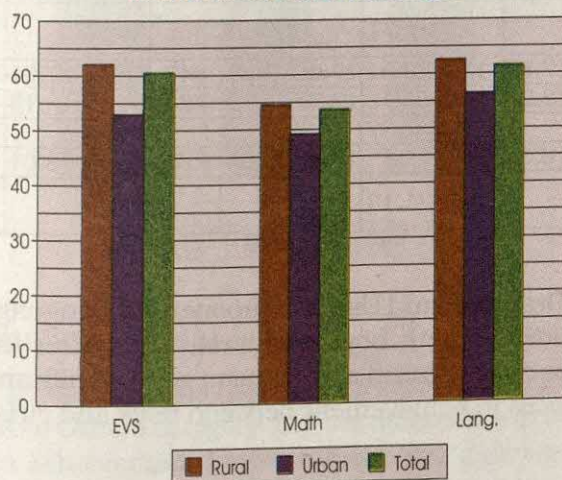
Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

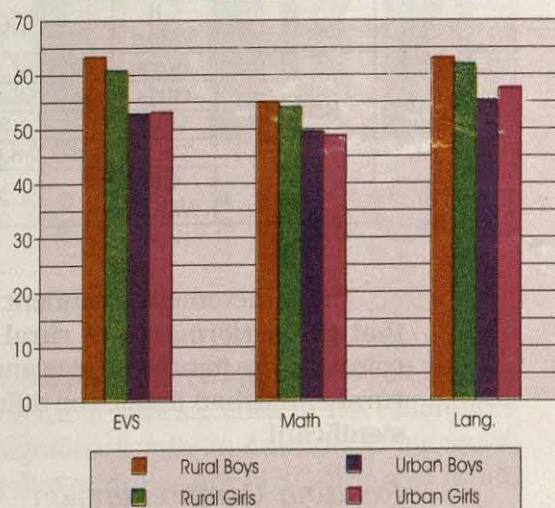
Table 17 Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	708	63.19	19.59	139	52.63	19.53	10.56	847	61.45	19.95	-5.83
	Girls	583	60.67	20.55	141	53.01	17.28	-7.66	724	59.18	20.18	-4.54
	Diff.		2.52			-0.38				2.27		
	Total	1291	62.05	20.06	280	52.82	18.4	-9.23	1571	60.4	20.08	-7.48
	CR Value		2.24			-0.17				2.23		
Mathe- matics	Boys	708	54.87	19.24	139	49.34	16.33	-5.53	847	53.96	18.9	-3.54
	Girls	583	53.92	18.77	141	48.64	15.42	-5.28	724	52.89	18.28	-3.49
	Diff.		0.95			0.7				1.07		
	Total	1291	54.44	19.03	280	48.99	15.85	-5.45	1571	53.47	18.61	-5.02
	CR Value		0.89			0.37				1.14		
Langu- age	Boys	708	62.95	16.03	139	54.98	15.24	-7.97	847	61.64	16.17	-5.59
	Girls	583	61.81	16.76	141	57.43	15.38	-4.38	724	60.96	16.58	-2.98
	Diff.		1.14			-2.45				0.68		
	Total	1291	62.44	16.37	280	56.21	15.33	-6.23	1571	61.33	16.36	-6.09
	CR Value		1.24			-1.34				0.82		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that the performance of rural students, both boys and girls was better than their counterpart in urban areas and the differences in achievement was found significant. In rural areas, the performance of boys was better than girls and the difference was significant. In urban areas, the achievement of girls was better than boys, though the difference was not significant. The overall performance of boys was better than girls and the difference was significant.

Mathematics

The data shows that the achievement of rural students, both boys and girls was better than their counterparts in urban areas and the differences were significant. The differences in achievement between boys and girls were not significant within the areas.

Language

The pattern of achievement in language was just similar as in case of achievement in Mathematics. The performance of both boys and girls in rural areas was better than their counterpart in urban areas and the differences were significant.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18 Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	708	66.41	18.39	139	56.29	17.33	10.12	847	64.75	18.59	-6.23
	Girls	583	65.31	18.41	141	58.78	17.04	-6.53	724	64.04	18.33	-4.02
	Diff.		1.1			-2.49				0.71		
	Total	1291	65.91	18.4	280	57.54	17.2	-8.37	1571	64.42	18.47	-7.29
	CR Value		1.07			-1.21				0.76		
Reading Comprehen- sion	Boys	708	57.19	17.88	139	52.81	17.66	-4.38	847	56.47	17.91	-2.67
	Girls	583	55.97	18.28	141	55.18	17.57	-0.79	724	55.82	18.13	-0.48
	Diff.		1.22			-2.37				0.65		
	Total	1291	56.64	18.07	280	54	17.62	-2.64	1571	56.17	18.01	-2.26
	CR Value		1.21			-1.13				0.71		

The achievement of student in Grammar and Usage component of Language reveals that the performance of rural students, both boys and girls, was better than their counterparts in urban areas and the differences in achievement were significant. Within rural and urban areas, the differences in achievement between boys and girls was not significant.

Reading Comprehension

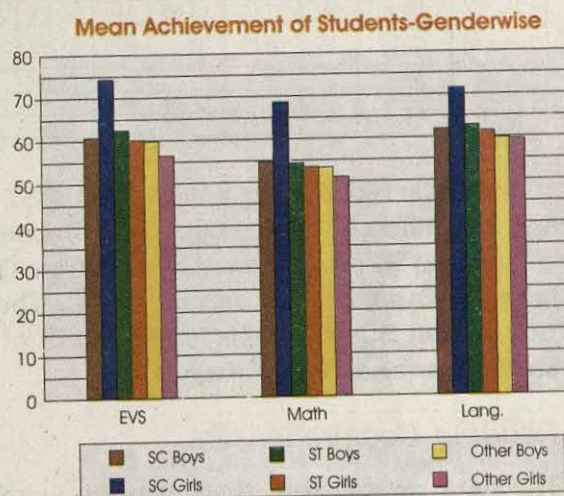
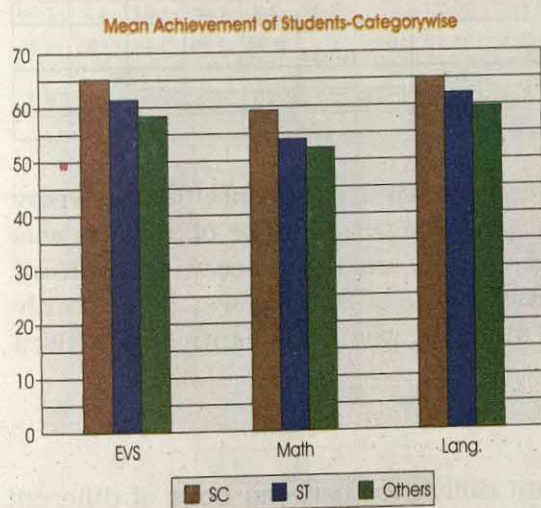
The performance of boys and girls in rural areas was better than their counterparts in urban areas. However, the difference in achievement was significant only in case of boys. The differences in achievement of boys and girls within rural and urban areas were not significant.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	29	60.78	21.3	516	62.43	19.04	302	59.85	21.27	-0.93	-0.22	-2.58	-1.74	1.65	0.41
	Girls	14	74.29	20.39	466	60.17	19.81	244	56.41	20.38	17.88	-3.19	-3.76	-2.36	14.12	-2.56
	Diff.		-13.51			2.26			3.44							
	Total	43	65.17	21.73	982	61.36	19.43	546	58.32	20.93	-6.85	-2	-3.04	-2.79	-3.81	-1.13
	CR Value		2.01			1.82			1.92							
Mathematics	Boys	29	54.72	18.81	516	54.31	19.39	302	53.29	18.08	-1.43	-0.39	-1.02	-0.76	-0.41	-0.11
	Girls	14	68.61	19.38	466	53.41	18.59	244	50.99	17.14	17.62	-3.33	-2.42	-1.73	-15.2	-2.89
	Diff.		-13.89			0.9			2.3							
	Total	43	59.24	19.89	982	53.88	19.01	546	52.27	17.69	-6.97	-2.23	-1.61	-1.66	-5.36	-1.73
	CR Value		2.22			0.74			1.52							
Language	Boys	29	61.9	15.3	516	62.75	16.41	302	59.73	15.69	-2.17	-0.73	-3.02	-2.61	0.85	0.29
	Girls	14	71.43	15.8	466	61.41	17.19	244	59.5	15.17	11.93	-2.75	-1.91	-1.52	10.02	-2.33
	Diff.		-9.53			1.34			0.23							
	Total	43	65	15.93	982	62.11	16.79	546	59.62	15.45	-5.38	-2.14	-2.49	-2.93	-2.89	-1.16
	CR Value		1.87			1.25			0.17							



Environmental Studies

The data reveals that performance of SC girls was better than ST girls followed by girls from Others category and the differences in achievement were significant. The differences in achievement between boys and girls were significant only in case of SC category, favouring girls students. It is worth mentioning that performance of SC girls was much better than students of any other category.

Mathematics

As in case of EVS, the performance of SC girls was better than ST girls followed by girls from Others category. However, these differences were significant between Others vs SC and ST vs SC. Within categories, the performance of SC girls was significantly better than SC boys. The performance of SC girls was better than students of Other categories.

Language

The achievement of SC girls was better than their counterparts in ST followed by Others. These differences were significant in case of Others vs SC and ST vs SC. The achievement differences between boys and girls were not significant in any of the category.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	29	62.07	18.54	516	66.26	18.66	302	62.42	18.26	0.35	0.1	-3.84	-2.88	4.19	1.18
	Girls	14	74.86	17.85	466	64.74	18.8	244	62.08	17.17	12.78	-2.61	-2.66	-1.9	10.12	-2.09
	Diff.		-12.79			1.52			0.34							
	Total	43	66.23	19.09	982	65.54	18.73	546	62.27	17.77	-3.96	-1.32	-3.27	-3.38	-0.69	-0.23
	CR Value		2.17			1.27			0.22							
Reading Comprehension	Boys	29	61.61	14.66	516	56.91	18.37	302	55.23	17.3	-6.38	-2.2	-1.68	-1.31	-4.7	-1.66
	Girls	14	65.71	16.3	466	55.85	18.77	244	55.19	16.84	10.52	-2.34	-0.66	-0.48	-9.86	-2.22
	Diff.		-4.1			1.06			0.04							
	Total	43	62.95	15.14	982	56.41	18.56	546	55.21	17.08	-7.74	-3.2	-1.2	-1.28	-6.54	-2.74
	CR Value		0.80			0.89			0.03							

The data reveals that achievement of ST boys was better than boys of Others category and the difference was significant. In case of girls, the performance of SC girls was better than ST girls followed by girls from Other category and difference was significant between Others vs SC and ST vs SC. The performance of SC girls was significantly better than SC boys. The achievement of ST students was significantly better than students from Others category.

Reading Comprehension

The data reveals that there was no significant difference between boys of different categories. The achievement of SC girls was better than ST girls followed by girls from Others category. The achievement difference between Others vs SC and between ST vs SC students was significant, that too favouring SC students in both cases. The difference between boys and girls was not significant in each category.

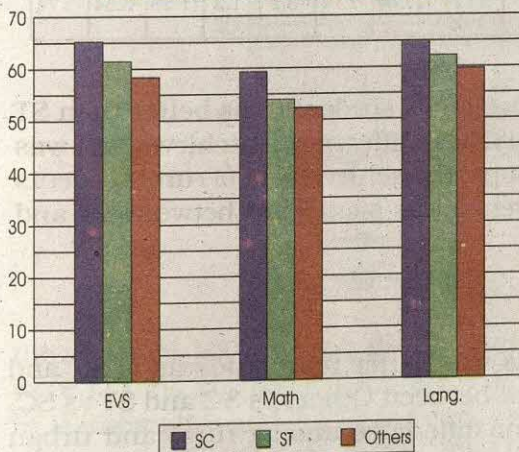
Areawise and Categorywise Achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

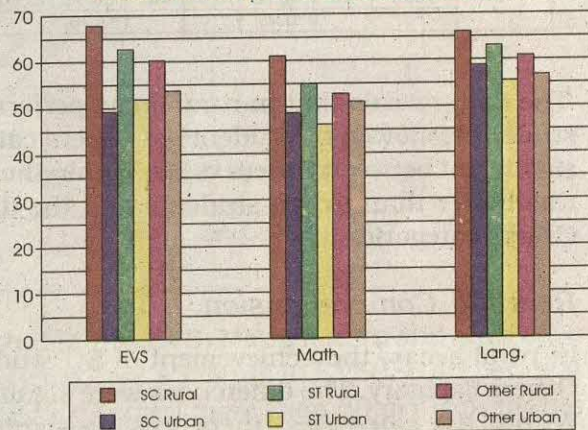
Table 21 Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
EVS	Rural	37	67.77	21.58	867	62.62	19.46	387	60.23	21.1	-7.54	-2.03	-2.39	-1.9	-5.15	-1.43
	Urban	6	49.17	15.94	115	51.87	16.45	159	53.65	19.81	4.48	0.67	1.78	0.81	2.7	0.4
	Diff.		18.6			10.75			6.58							
	Total	43	65.17	21.73	982	61.36	19.43	546	58.32	20.93	-6.85	-2	-3.04	-2.79	-3.81	-1.13
	CR Value		2.51			6.44			3.46							
Mathematics	Rural	37	60.95	20	867	54.9	19.37	387	52.77	17.99	-8.18	-2.4	-2.13	-1.89	-6.05	-1.8
	Urban	6	48.68	16.95	115	46.18	13.88	159	51.03	16.9	2.35	0.33	4.85	2.6	-2.5	-0.36
	Diff.		12.27			8.72			1.74							
	Total	43	59.24	19.89	982	53.88	19.01	546	52.27	17.69	-6.97	-2.23	-1.61	-1.66	-5.36	-1.73
	CR Value		1.60			6.01			1.07							
Language	Rural	37	66.01	15.46	867	63	16.97	387	60.83	14.93	-5.18	-1.95	-2.17	-2.28	-3.01	-1.15
	Urban	6	58.75	18.89	115	55.41	13.75	159	56.7	16.32	-2.05	-0.26	1.29	0.71	-3.34	-0.43
	Diff.		7.26			7.59			4.13							
	Total	43	65	15.93	982	62.11	16.79	546	59.62	15.45	-5.38	-2.14	-2.49	-2.93	-2.89	-1.16
	CR Value		0.89			5.40			2.75							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that the performance of SC boys in rural areas was better than ST and Others category boys. The difference in achievement was significant in case of Others vs SC students. The categorywise performance of rural students was better than urban students and the difference was significant in each category.

Mathematics

The performance of rural students of SC category was better than ST followed by students of Others category. The difference in achievement was significant in case of Others vs ST that too favouring students of Others category. Within rural and urban students, the difference in achievement was significant in ST category favouring rural students.

Language

The achievement of students of SC category was better than ST students followed by students of Others category. The differences in achievement was significant between

Others vs SC and Others vs ST. Within the categories, the performance of rural students was better than urban students and the difference in achievement was significant between ST and Others category.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	37	67.24	19.13	867	66.76	18.84	387	63.89	17.18	-3.35	-1.03	-2.87	-2.65	-0.48	-0.15
	Urban	6	60	19.27	115	56.31	15.04	159	58.34	18.59	-1.66	-0.21	2.03	1	-3.69	-0.46
	Diff.		7.24			10.45			5.55							
	Total	43	66.23	19.09	982	65.54	18.73	546	62.27	17.77	-3.96	-1.32	-3.27	-3.38	-0.69	-0.23
	CR Value		0.85			6.78			3.24							
Reading Comprehension	Rural	37	63.96	14.27	867	56.74	18.8	387	55.73	16.51	-8.23	-3.3	-1.01	-0.96	-7.22	-2.97
	Urban	6	56.66	20.11	115	53.91	16.51	159	53.96	18.4	-2.7	-0.32	0.05	0.02	-2.75	-0.33
	Diff.		7.3			2.83			1.77							
	Total	43	62.95	15.14	982	56.41	18.56	546	55.21	17.08	-7.74	-3.2	-1.2	-1.28	-6.54	-2.74
	CR Value		0.85			1.70			1.05							

The data reveals that in rural areas performance of SC students was better than ST students followed by students of Others category. The difference in achievement was significant between Others vs ST. Within the groups, the achievement of rural students was better than urban students and the difference was significant between ST and Others categories.

Reading Comprehension

In rural areas, the achievement of SC students was better than students of ST and Others category. The differences were significant between Others vs SC and ST vs SC. Within the categories, there was no significant difference among rural and urban students.

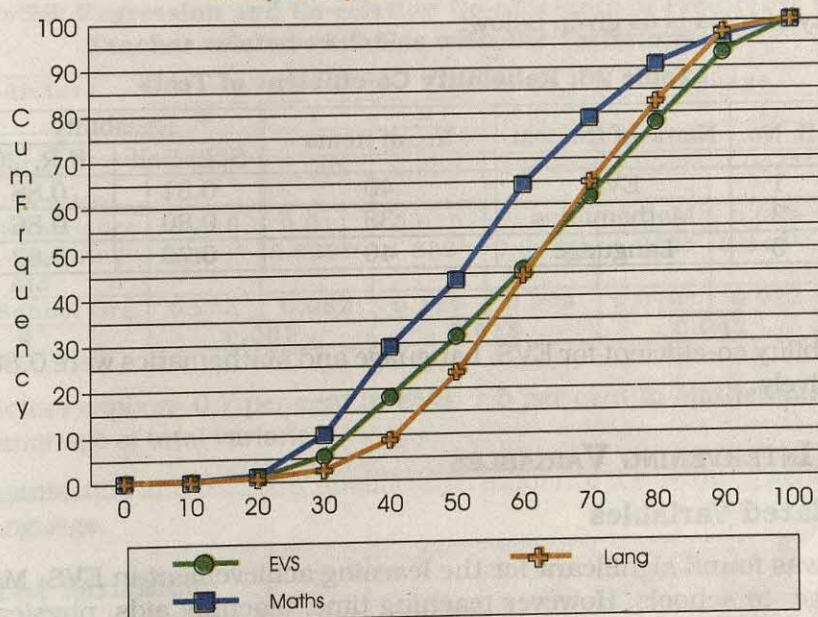
DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23 Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	3	9	72	201	205	229	249	253	239	111
	cf	3	12	84	285	490	719	968	1221	1460	1571
	cf(%)	0.19	0.76	5.35	18.14	31.19	45.77	61.62	77.72	92.93	100
Math	f	0	18	140	299	227	326	228	183	96	54
	cf	0	18	158	457	684	1010	1238	1421	1517	1571
	cf(%)	0	1.15	10.06	29.09	43.54	64.29	78.80	90.45	96.56	100
Language	f	0	8	28	102	230	330	321	275	238	39
	cf	0	8	36	138	368	698	1019	1294	1532	1571
	cf(%)	0	0.51	2.29	8.78	23.42	44.43	64.86	82.37	97.52	100

The figures posted in Table 23 revealed that in EVS, 3 students were in the range 0 – 10 per cent. In Mathematics and Language, none of the students figure in the range 0-10 per cent. The least number of cases in EVS (3), Mathematics (18) and Language (8) were in the range 0-10 per cent, 10-20 per cent and 10-20 per cent respectively. The maximum number of case in EVS (253), Mathematics (326) and in Language (330) were in the range 70-80 per cent, 50-60 per cent and 50-60 per cent respectively. In

Frequency Distribution of Students



the range 90-100 per cent, the number of students in EVS, Mathematics and Language were 111, 54 and 39 respectively. The 68.81 per cent students in EVS, 56.46 per cent in Mathematics and 76.58 per cent in Language scored more than 50 per cent marks whereas 54.23 per cent in EVS, 35.71 per cent in Mathematics and 55.57 per cent in Language scored more than 60% marks.

CLASSIFICATION OF TEST ITEMS

Test items were claimed according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	3
25 to less than 50	Difficult	9	9	15
50 to less than 75	Average	25	23	13
75 to 100	Very Easy	6	8	7

Most of items appeared to be of average difficulty. Very few items were very difficult. In Mathematics difficult areas were fractions, decimal system and conversion of units.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	2	1	0
.30 to less than .70	Average Discrimination	34	30	34
Less than .30	Poor Discrimination	4	9	4

Most of the items were discriminating adequately.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.81	0.88
2	Mathematics	38	0.80	0.86
3	Language	40	0.76	0.82

The reliability co-efficient for EVS, Language and Mathematics were 0.88, 0.86 and 0.82 respectively.

IMPACT OF INTERVENING VARIABLES

School Related Variables

No variable was found significant for the learning achievement in EVS, Mathematics and Language in schools. However teaching time, teaching aids, physical facilities, ancillary facilities, community participation, availability of competency-based teaching-learning material are positively associated with learning achievement of students. Pupil-teacher ratio is negatively associated with the learning achievements of students in all three subjects, indicating more children in a class adversely effect in learning of various subjects.

Table 27: Regression and Co-relation Co-efficients of Predictors of School related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	61.690	--	15.661	--	62.843	--
PTR	-0.120	-0.024	-0.162*	-0.017*	-0.084	-0.016
Com_Participation	0.770	0.900	0.488	0.096	0.425	0.011
Teach-aid	0.080	0.130	0.330*	0.130*	0.631	0.198
Physical facility	0.160	0.103	0.944	0.102	0.321	0.017
Ancillary facility	0.748	0.040	0.840	0.039	0.112	0.014
Instructional time	0.042	0.086	0.060	0.097	0.017	0.034
Working day	0.055	0.056	0.074	0.055	0.059	0.018
Index-Comp. TLM	0.660	0.040	0.052	0.030	-0.080	-0.030
R²	0.068		0.125		0.064	

The predictors explain 6.8 per cent of total variance in EVS, 12.5 per cent in Mathematics and 6.8 per cent in Language.

Teacher Related Variables

No teacher-related variable influences the learning achievement of children in EVS and Mathematics significantly. This indicates that teaching experience including training of teachers, educational qualification, teaching aids including teaching style and school organisation has not helped the children significantly in the improving their learning achievement in the EVS and Mathematics. However, Teaching aids significantly affected in learning achievement.

Table 28: Regression and Co-relation Co-efficients of Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	66.051	--	56.158	--	70.032	--
Index-Qualification	0.021	0.005	0.023	0.100	1.020*	0.057**
Index-Experience	0.286	0.011	0.615	0.044	0.231	0.094
Index-Teaching Aid	1.303*	0.929**	1.382*	0.647**	1.902*	0.348**
Index-School Org.	0.262	0.032	0.110	0.004	0.019*	0.022
R²	0.007		0.015		0.041	

The predictors explain 0.7 per cent in EVS, 1.5 per cent in Mathematics and 4.1 per cent in Language of total variance.

School organisation and teachers' qualification influence the learning achievement of children in language.

Pupil Related Variables

Attendance of students in the school, educational status and occupation of parents/guardians and age of the children influence the learning achievement of children in EVS, Mathematics and Language. However, age of students are negatively associated with the criterion, indicating the children having good attendance and children in the higher age group achieve poorly. The educational status and occupation of parents/guardians is positively also associated with the criteria. This indicates that educated parents help their children in learning all the three subjects. Besides number of detention in class negatively associated at indicates students who detained performed poorly.

Table 29: Regression and Co-relation Co-efficients of Predictors of Pupil Related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	74.246	--	60.902	--	70.106	--
Index-Ed & Occu	1.120**	0.120**	1.102	0.044	1.220**	0.133**
Index-Schooling	2.120	0.047	2.099	0.023	2.022*	0.121
Index-TLP	2.263*	0.053**	3.885*	0.095**	1.552	0.131
Age	-0.077**	-0.072**	-1.966**	-0.123**	-1.333**	-0.080**
Detention	-0.609	-0.036	-0.191	-0.009	-0.218	-0.010
Attendance	0.121*	0.062*	0.221*	1.156**	0.193**	0.110*
R²	0.037		0.054		0.026	

The predictors explain 3.7 per cent of total variance in EVS, 5.4 per cent in Mathematics and 2.6 per cent in Language independently.

HARD SPOT OF LEARNING

EVS

In EVS no item was found very difficult. But, 9 (23%) items were found difficult. The hard spots were found in identification of natural features of the country, understanding a longitude and a latitude, system of Government of India, knowledge about pre-British rule, effects of weather conditions on human bodies and identification of simple machine.

Language

Likewise EVS no items were found very difficult in Language. However, 9 (23%) items were correctly responded to by less than 50% students and found difficult. The hard spots in learning of language has been identified as structure, comprehension of time table, informatical passage and comprehension of story.

Mathematics

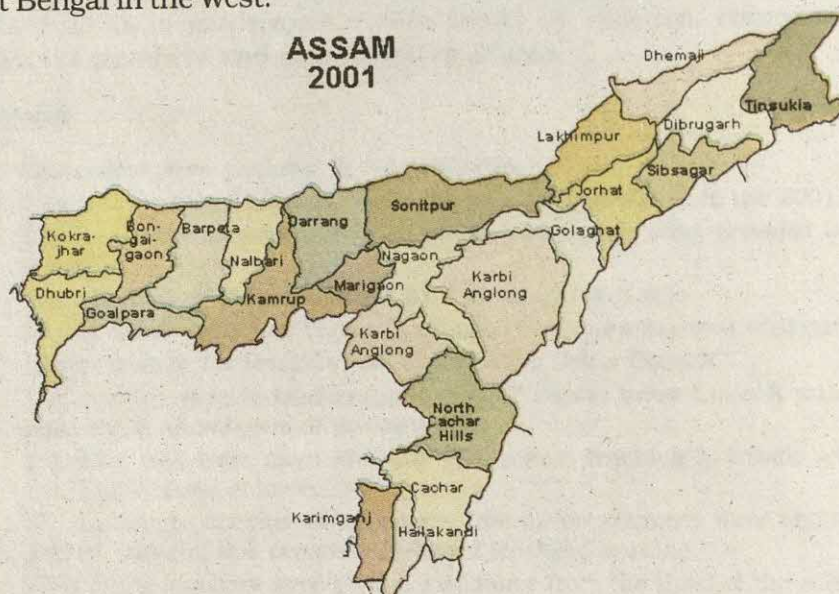
In items 23, 26 and 29 were found very difficult and 15 (38%) items were found difficult. The hard spots in mathematics were found as fraction, commercial mathematics, rounding of numbers and measurement of area.

FINDINGS

- Computers were available in only 4% schools.
- Competency based teaching materials were more available in the 2001 then previous year.
- Free uniform and scholarship for regular attendance were provided between 18% to 42% students.
- Average number of working days were about 177 in a year.
- Pupil Teacher ratio was higher in urban schools as compared with rural schools.
- Approximately 1% teachers had qualification below Class X.
- The number of male teachers having qualification below Class X was higher than female teachers in all subjects at primary level.
- Teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools.
- The maximum number of in-service training programmes were organised on the themes general training and competency-based teaching-learning.
- Most of the teachers were getting assistance from the Head of the schools.
- Approximately 70% father and 44% mothers were literate.
- Majority of mothers were housewives in both in urban and rural areas.
- Percentage of girls attending 90-100% of school days were higher than boys.
- Achievement of students in Language was better than EVS followed by Mathematics.
- In all the three subjects, performance of rural students, both boys and girls was better than their urban counterparts.
- Achievement of SC students was better than ST followed by Others category in all three subjects.
- In SC category, girls performed better than boys in all the three subjects.
- 7% students scored between 90 to 100% in EVS.
- Educated parents help the children in improving their learning skills in the three subjects.
- Pupil Teacher ratio is negatively associated with the learning achievement of students in all three subjects. Indicating more children in a class adversely effect in learning of various subjects.

INTRODUCTION

Assam is situated in the northeast corner of the country with a total geographical area of 78,438 sq. km. Assam is surrounded by the state of Arunachal Pradesh in the North, Nagaland and Manipur in the East, Meghalaya and Mizoram in the South and Tripura and West Bengal in the West.



The Govt. of Assam has laid stressed upon Primary Education, which is the basic building block of the children them for turning into respectable citizen, aiming constructive contributors towards a better society in the field of science, technology, environment, administration and development. So primary education must play the crucial role of catalyst for training about the necessary improvement in education system. Although Assam has gained a stupendous success in Literacy, still it has to long way to go. The literacy rate of Assam as per 2001 Census comes to 64.20%. It aggregates to arround 71.93% for male and 56.03% for female (Source: Census, 2001). As per the secondary data the state has 23,01,638 primary enrolled students and 86,813 teachers. It indicates a healthy Pupil Teacher ratio i.e., 27:1 (Source: SSA and DPEP, 2003). Though Assam has introduced the 10+2+3 national pattern of education since 1973, there was a major deviation from the national norms of ten years of schooling.

In Assam instead of 5+3+2 pattern of schooling upto the secondary stage, the 4+3+3 pattern is followed i.e., four years of primary education followed by three years of upper primary education and three years of secondary education.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

School

A total of 169 schools were sampled from Dibrugarh, Kamrup, Karbi Anglong and Nalbari districts of Assam. Out of total sample schools, 45 schools were from Dibrugarh, 50 from Kamrup, 25 from Karbi Anglong and remaining 49 from Nalbari district.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	133	126	94.74	0	0	7	5.26
Urban	36	32	88.89	0	0	4	11.11
Total	169	158	93.49	0	0	11	6.51

Teacher

A total 501 teachers were sampled from 169 sampled schools. Out of 501 teachers, 353 teachers were males and 148 teachers were females. Areawise, 396 teachers were from rural areas and 105 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Category										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	30	9.84	39	12.79	92	30.16	144	47.21	305
	Female	6	6.59	11	12.09	32	35.16	42	46.15	91
	Total	36	9.09	50	12.63	124	31.31	186	46.97	396
Urban	Male	9	18.75	8	16.67	9	18.75	22	45.83	48
	Female	4	7.02	4	7.02	12	21.05	37	64.91	57
	Total	13	12.38	12	11.43	21	20	59	56.19	105
Total	Male	39	11.05	47	13.31	101	28.61	166	47.03	353
	Female	10	6.76	15	10.14	44	29.73	79	53.38	148
	Total	49	9.78	62	12.38	145	28.94	245	48.9	501

Table 2 shows that the percentage of female teachers was higher than male teachers in case of OBC and Others categories. However, this trend was reverse in Scheduled Castes and Scheduled Tribes categories. In rural schools, 9.09%, 12.63%, 31.31% and 46.97% teachers were of SC, ST, OBC and Others categories respectively. In urban

schools, 12.38%, 11.43%, 20% and 56.19% teachers were from SC, ST, OBC and Others categories, respectively. In urban areas, the number of female teachers was more than male teachers.

Student

A total number of 3,689 students appeared in each of three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the sampled students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Dibrugarh	Rural	445	421	866
	Urban	63	69	132
	Total	508	490	998
Kamrup	Rural	312	282	594
	Urban	191	298	489
	Total	503	580	1083
Karbi Anglong	Rural	170	186	356
	Urban	81	49	130
	Total	251	235	486
Nalbari	Rural	522	600	1122
	Total	522	600	1122
Total	Rural	1449	1489	2938
	Urban	335	416	751
	Total	1784	1905	3689

Out of 3,689 students, 2,938 students were from rural areas and remaining 751 students were from urban areas. Out of the total sample, 1,784 were boys and 1,905 were girl students. In Nalbari district not a single urban students could be included.

PROFILES

This section deals with the profiles of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre-Primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	20	15.04	3	2.26	97	72.93	23	17.29	18	7.52
Urban	7	19.44	0	0	21	58.33	7	19.44	18	22.22
Total	27	15.98	3	1.78	118	69.82	30	17.75	18	10.65

Out of 113 rural schools, pre-primary classes were attached with 20 schools, whereas in urban areas, out of 36 schools, it was attached with only 7 schools.

Facilities related to teaching-learning process

It was observed that in approximately 50% to 68% schools play, material and toys, game equipment, reference books, dictionaries, encyclopedia and children's books were available to facilitate teaching-learning process. Besides, maps and globes were available in more than 72% schools. However, mini tool kits were available in 20% schools. Further, magazine, journals, newspapers, charts, maths kit and primary science kit were available in 43% to 49% of the total sampled schools.

Infrastructural Facilities

It was observed that black boards, school bells, chairs and tables for teachers, chalk and duster were available in more than 90% schools. Besides, pin up board/notice board, play ground, water pitcher, ladel and glasses were available in 50% to 70% schools. Further, dustbins and musical instruments were available in less than 31% schools.

Ancillary Facilities

T.V. and computers were available in 2% and 5% schools respectively. Annual medical check-up and immunisation facility for children were available in only 10% schools. Further, safe drinking water and toilet facilities were available in approximately 50% schools. First aid kit was available in one-fourth of schools. Separate toilet for girls was available in only 40% schools.

Competency-based Teaching Materials

Information gathered shows that competency-based textbooks were available in 2 to 92 schools for Classes I to V in the year 2001 as compared to 3 to 11 schools in the year 2000. Workbooks were available in 3 to 12 schools for Classes I to V in the year 2001. Further, Teacher's Handbooks for Classes I to V were available from 3 to 24 schools. Besides, teaching-aids for Classes I to V were available in 2 to 18 schools.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes in 169 schools.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	188	305	271	354	320	569	234	675	1013	1903
	%	18.56	16.03	26.75	18.6	31.59	29.9	23.10	35.47	100	100
Free uniform	N	236	237	239	238	10	14	12	11	497	500
	%	47.48	47.40	48.10	47.60	2.01	2.8	2.41	2.2	100	100
Free textbooks	N	138	20	109	95	203	136	120	55	570	306
	%	24.21	6.56	19.12	31.05	35.61	44.44	21.06	17.95	100	100
Scholarship for regular attendance	N	233	234	240	244	237	236	236	235	946	949
	%	24.63	24.66	25.37	25.71	25.05	24.87	24.95	24.76	100	100
Other Schemes	N	224	227	224	231	224	226	234	235	906	919
	%	24.72	24.70	24.72	25.14	24.72	24.59	25.84	25.57	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, boys (31.59%) from OBC category and girls (35.47%) from Other category were maximum benefited. However, free uniform and free textbooks were more available to both boys and girls from SC and ST category. But, scholarship for regular attendance and other schemes were more or less equally distributed amongst both boys and girls across all the categories.

Instructional time

Average number of working days in schools was approximately 197. It was highest (212 days) in Nalbari and lowest (175 days) in Dibrugarh district. On an average, schools were having 7 periods in a day of approximately 41 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 133 rural schools, 28 schools were having Village Education Committees (VEC). Parent-Teacher Association (PTA) was found more in urban schools than rural schools, whereas, School Management Committee (SMC) were more in term of percentage in rural than urban schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	28	5	33
	%	21.05	13.89	19.53
AEC	N	0	0	0
	%	0	0	0
SMC	N	123	31	154
	%	92.48	86.11	91.12
PTA	N	43	17	60
	%	32.33	47.22	79.55
Number of schools	N	133	36	169
	%	100	100	100

Teachers' Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil - Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	133	853	76.02	269	23.98	1122	8	24
Urban	36	222	41.57	312	58.43	534	15	28
Total	169	1075	64.92	581	35.08	1656	10	25

Table 7 shows that overall number of male teachers was more than female teachers. Though, the number of female teachers in urban areas was more than male teachers. The average number of teachers per school was 8 and 15 in rural and urban area respectively. Pupil-Teacher ratio was higher in urban than rural schools.

Educational Qualification

The percentage of male teachers holding PG degree was higher than female teachers. However, this percentage was less than 4%. More than 50% teachers were graduates. Besides, 1% teachers had qualification below Class X. Percentage of female graduate teachers was more than male teachers.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	4	1.13	30	8.5	130	36.83	174	49.29	15	4.25	353
Female	1	0.68	5	3.38	48	32.43	89	60.14	5	3.38	148
Total	5	1	35	6.99	178	35.53	263	52.5	20	3.99	501

Table 9 presents the percentage of teachers according to level upto which they had studied Mathematics, Science, Language and Social Science.

Table 9: The Level upto which various Subjects Studied

Subjects	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	15	4.25	203	57.51	62	17.56	73	20.68	353
	Female	14	9.46	105	70.95	15	10.14	14	9.46	148
	Total	29	5.79	308	61.48	77	15.37	87	17.37	501
Science	Male	23	6.52	203	57.51	42	11.9	85	24.08	353
	Female	10	6.76	106	71.62	8	5.41	24	16.22	148
	Total	33	6.59	309	61.68	50	9.98	109	21.76	501
Language	Male	4	1.13	55	15.58	173	49.01	121	34.28	353
	Female	4	2.7	12	8.11	61	41.22	71	47.97	148
	Total	8	1.6	67	13.37	234	46.71	192	38.32	501
Social Science	Male	30	8.5	234	66.29	39	11.05	50	14.16	353
	Female	12	8.11	94	63.51	21	14.19	21	14.19	148
	Total	42	8.38	328	65.47	60	11.98	71	14.17	501

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. This trend was reverse in case of Language. However, in Social Science the percentage was almost same for both genders. The percentage of female teachers having secondary qualification in Mathematics, Science and Social Science was higher than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
169	Male	113	75	10
	Female	39	43	4
	Total	152	118	14

The majority of teachers were diploma/certificate holders in primary/elementary education and very few teachers had M.Ed. degree. However, approximately 1/4th teachers had B.Ed. degree.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. Dictionary was more available to teachers teaching in rural schools than teachers teaching in urban schools. In contrast to this, teachers guide, books other than textbooks, maps, globe, charts, flash cards, science kit, mathematics kit and other teaching aids were more available in urban school teachers than teachers in rural areas. Further, almost all teaching aids were more available to male teachers than female teachers in rural schools. In urban areas, science kits and mathematic kits were more available to female teachers than male teachers.

In-service Training

The account of training programmes for teachers organised by various agencies for teachers during the last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers
1. School Complex	N	14
	%	31.82
2. Block Resource Centre	N	2
	%	4.55
3. Teacher Resource Centre	N	1
	%	2.27
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	17
	%	38.64
6. SCERT	N	6
	%	13.64
7. Others	N	4
	%	9.09

Data portrays the number and percentage of teachers who attended in-service training programmes organised in the districts by various agencies during last three years. Out of the total 31.82% teachers attended the training programme organised by School Complex, 38.64% attended training programmes by DIET followed by SCERT (13.64%) and others (9.09%).

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	9
2. Content Enrichment	25
3. Production of Instructional Material	5
4. Use of Instructional Material	1
5. Assessment of Pupil Learning	4
6. Competency based Teaching Learning	6
7. Activity based Joyful Learning	0
8. Others	0

During in-service training programme number of themes were covered i.e., general training programme, content enrichment, production of instructional material, use of instructional material and assessment of pupil's learning etc. The maximum number of programmes were organised on the theme 'content enrichment'. The effectiveness of various training programme is given in Table 14.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	15	14	13	5
	%	32.16	30.43	28.26	10.87
Average	N	29	31	30	34
	%	63.04	67.39	56.52	73.91
Low	N	2	1	3	7
	%	4.35	2.17	6.52	15.22

It is evident that 63% teachers training programmes were 'averagely effective' in terms of utility of knowledge. However, impact of these training programme was rated as 'Average' by 57% to 74% teacher in different subjects. The improvement in teaching skills in all subjects due to those training programmes was rated 'High' by 11% to 30% teachers.

Out of 501 sampled teachers, 457 teachers were without any in-service training during last three years. Percentage of male and female teachers who have not attended any in-service training programme was very high. The percentage of teachers without inservice training was more in rural areas than urban areas. Further, percentage of male teachers without in-service training was more than female teachers.

Academic Assistance received from Various Sources

In the state various committees have been constituted to provide academic assistance to teachers to improve quality education. Most of the teachers in rural and urban areas were getting maximum academic assistance from the Head of school and other teachers of the schools. However, only few teachers of rural schools and 30% to 40% teachers of the schools were getting academic assistance from Cluster Resource Coordinators, Block Resource Coordinator and DIET. Further, a large number of teachers both in urban and rural were getting assistance from DIET.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 74% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14 indicates that approximately 14% fathers and 27% mothers of the students were illiterate. Only 6% fathers and 1% mothers were having degree or higher educational qualification. Parents educated upto secondary level were maximum as compared to others. Further, majority of the remaining parents were educated either upto primary level or senior secondary level. Educational level of mothers was poorer than fathers.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	126	3.41	140	3.80
1. Illiterate	524	14.20	996	27.00
2. Literate	415	11.25	417	11.30
3. Primary	357	9.68	386	10.46
4. Secondary	1082	29.33	936	25.37
5. Sr. Secondary	422	11.40	244	6.61
6. Degree and above	224	6.07	46	1.25
7. Donot Know/Cannot say	539	14.61	524	14.20

Occupation of Parents

Information regarding occupation of father and mother of the students has been presented in Table 15.

Table 15 Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	134	42	176	100	54	154
Household/ Housewife	15	2	17	1818	552	2370
Farmer	819	40	859	46	7	53
Poultry farming	14	7	21	51	6	57
Agricultural labour	221	27	248	19	5	24
Picking forest produce	12	2	14	4	0	4
Domestic Servent	129	53	182	686	69	755
Street Venders	32	5	37	4	1	5
Manual unskilled worker	190	43	233	64	1	65
Skilled worker	253	98	351	24	3	27
Clerical worker	146	39	185	11	5	16
Shopkeeper	197	63	260	6	11	17
Employer	249	116	365	15	8	23
Manager/ Senior Officer	465	164	629	75	22	97
Others	62	50	112	15	7	22

In rural areas, approximately 30% mothers were housewives and 20% fathers were farmers. Likewise in urban areas also, majority of mothers were housewives but fathers were managers, senior officers or employer in both areas. Only in few cases fathers and mothers were street vendors or forest produce pickers. Fathers' occupation in decreasing order was farmer, manager/senior officer, employer, skilled worker, shopkeeper, agricultural labour, manual unskilled worker, clerical worker and domestic servants etc. Mothers occupation in decreasing order was household/house wife, domestic servant, managers and manual unskilled worker etc.

Academic Assistance

The information collected from the students regarding academic assistance they (students) were getting have been analysed and presented in Table 16.

The percentage of girls both in rural and urban areas get more help from all family members than boys. The maximum contribution was from father/guardian followed by elder brother/sister in rural areas and mothers in urban areas.

Table 16 Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	621	719	157	218	778	937
	%	42.86	48.29	46.87	52.4	43.61	49.19
Mother	N	418	521	95	186	513	707
	%	28.85	34.99	28.36	44.71	28.76	37.11
Elder Brother/Sister	N	487	552	92	161	579	713
	%	33.61	37.07	27.46	38.7	32.46	37.43
Others	N	170	208	22	48	192	256
	%	11.73	13.97	6.57	11.54	10.76	13.44

Attendance

Attendance plays an important role in learning. It is observed that the percentage of boys having attendance more than 80% was higher than girls both in rural and urban areas. Overall, approximately 60% students were attending schools on 80% and above working days.

STUDENTS ACHIEVEMENT

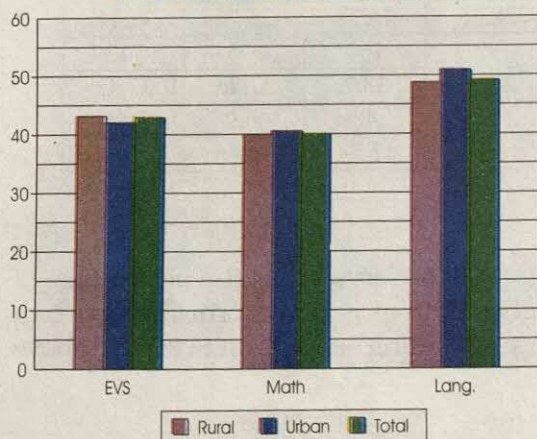
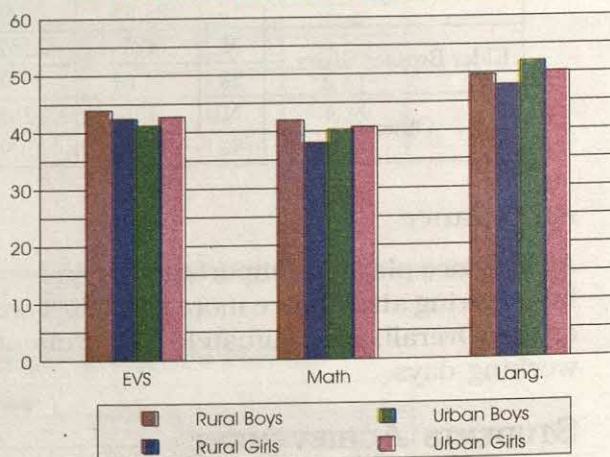
This section presents the achievement of Class V students in EVS, Mathematics and Language on the competency-based achievement tests administered in the year 2002. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students, areawise, genderwise and categorywise is presented below. Further, distribution of frequencies and cumulative frequencies against marks intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

The genderwise and areawise achievement of Class V students in EVS, Mathematics and Language is given in Table 17. The performance of students in different subjects is discussed in the subsequent paragraphs.

Table 17 Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1449	43.89	16.34	335	41.22	14.05	-2.67	1784	43.38	15.96	-3.04
	Girls	1489	42.39	16.83	416	42.66	15.84	0.27	1905	42.45	16.61	0.3
	Diff.		1.5			-1.44				0.93		
	Total	2938	43.13	16.6	751	42.02	15.07	-1.11	3689	42.9	16.31	-1.76
	CR Value		2.45			-1.32				1.73		
Mathe - matics	Boys	1449	41.93	16.93	335	40.28	16.46	-1.65	1784	41.62	16.85	-1.64
	Girls	1489	37.94	16.68	416	40.69	16.64	2.75	1905	38.54	16.7	2.98
	Diff.		3.99			-0.41				3.08		
	Total	2938	39.91	16.92	751	40.51	16.55	0.6	3689	40.03	16.84	0.88
	CR Value		6.43			-0.34				5.57		
Language	Boys	1449	49.64	12.66	335	51.96	11.7	2.32	1784	50.08	12.51	3.22
	Girls	1489	47.82	12.86	416	50.07	11.69	2.25	1905	48.31	12.65	3.39
	Diff.		1.82			1.89				1.77		
	Total	2938	48.72	12.79	751	50.91	11.72	2.19	3689	49.16	12.61	4.48
	CR Value		3.87			2.2				4.27		

Mean Achievement of Students-Areawise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data reveals that the achievement of rural boys was significantly higher than that of urban boys. The achievement of rural boys was also higher than girls and the difference was significant. In urban areas, there was no significant difference in achievement between boys and girls.

Mathematics

In Mathematics, the achievement of urban girls was significantly higher than rural girls. In rural areas, the performance of boys was better than girls and the difference in achievement was significant. The overall performance of boys was significantly better than that of girls.

Language

The data reveals that performance of urban students, both boys and girls, was better than their counterparts in rural areas and the differences in achievements were significant in each case. Within rural and urban areas, the achievement of boys was significantly higher than girls and the differences were significant.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18 Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram - mar & Usage	Boys	1449	50.36	12.36	335	51.45	12.26	1.09	1784	50.57	12.34	1.46
	Girls	1489	48.39	12.36	416	49.78	11.72	1.39	1905	48.69	12.23	2.11
	Diff.		1.97			1.67				1.88		
	Total	2938	49.36	12.4	751	50.52	11.98	1.16	3689	49.6	12.32	2.35
	CR Value		4.32			1.89				4.64		
Reading Compre hension	Boys	1449	48.45	19.3	335	52.82	17.93	4.37	1784	49.27	19.12	3.96
	Girls	1489	46.86	19.71	416	50.54	18.69	3.68	1905	47.67	19.55	3.51
	Diff.		1.59			2.28				1.6		
	Total	2938	47.64	19.52	751	51.56	18.38	3.92	3689	48.44	19.36	5.15
	CR Value		2.21			1.7				2.51		

The data reveals that achievement of urban students was significantly higher than rural students. There was no significant difference in the achievement of urban boys and rural boys. However, achievement of urban girls was significantly higher than rural girls. In rural areas, performance of boys was significantly higher than girls. The overall performance of boys was better than girls and the difference was significant.

Reading Comprehension

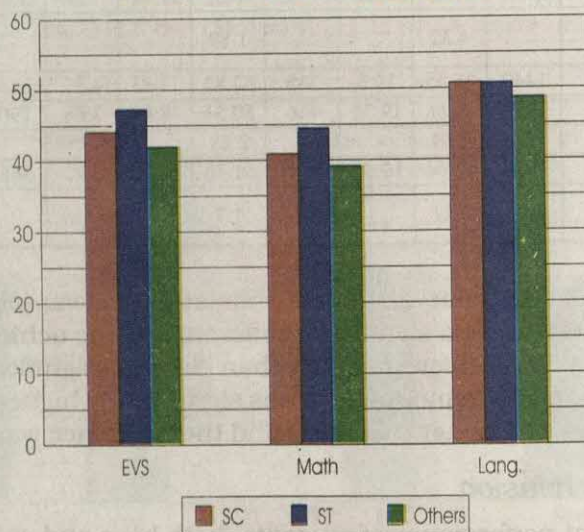
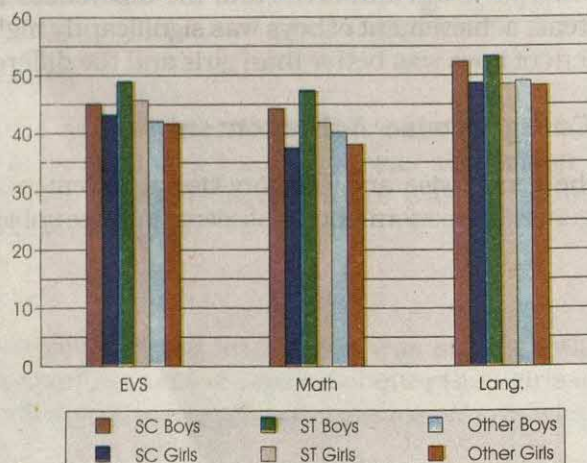
The data shows that performance of students, both boys and girls, in urban areas was better than their counterparts in rural areas and the differences in achievement were significant. In rural areas, achievement of boys was significantly higher than that of girls. The overall achievement of boys was better than girls and the difference was significant.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students in these subjects is discussed here.

Table 19 Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	223	45.04	14.8	260	48.74	20.83	1301	42.03	14.75	-3.01	-2.81	-6.71	-4.95	3.7	2.27
	Girls	211	43.03	14.69	288	45.71	21.22	1406	41.7	15.72	-1.33	-1.21	-4.01	-3.04	2.68	1.67
	Diff.		2.01			3.03			0.33							
	Total	434	44.07	14.76	548	47.15	21.07	2707	41.86	15.26	-2.21	-2.88	-5.29	-5.59	3.08	2.69
	CR Value		1.42			1.69			0.56							
Mathe matics	Boys	223	44.22	16.82	260	47.2	19.17	1301	40.06	16.07	-4.16	-3.43	-7.14	-5.62	2.98	1.82
	Girls	211	37.32	14.02	288	41.83	20.12	1406	38.05	16.23	0.73	0.69	-3.78	-2.99	4.51	2.95
	Diff.		6.9			5.37			2.01							
	Total	434	40.86	15.88	548	44.38	19.84	2707	39.02	16.18	-1.84	-2.24	-5.36	-5.94	3.52	3.09
	CR Value		4.65			3.20			3.24							
Langua ge	Boys	223	52.84	13.36	260	53.1	13.58	1301	49	11.96	-3.84	-4.02	-4.1	-4.53	0.26	0.21
	Girls	211	48.54	12.89	288	48.45	15.16	1406	48.24	12.04	-0.3	-0.32	-0.21	-0.22	-0.09	-0.07
	Diff.		4.3			4.65			0.76							
	Total	434	50.75	13.3	548	50.65	14.6	2707	48.61	12.01	-2.14	-3.15	-2.04	-3.07	-0.1	-0.11
	CR Value		3.41			3.79			1.65							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data reveals that performance of ST students, both boys and girls, was better than SC and Others category students. The differences in achievement were significant in case of achievement of boys and total students. In case of girls, differences in achievement were significant only in case of Others vs ST students. Within categories, differences in achievement between boys and girls were not significant.

Mathematics

As in case of EVS, the performance of ST students was better than SC followed by students of Others category and the differences were significant. In case of boys, the differences in achievement were significant between Others vs SC and Others vs ST whereas in case of girls differences were significant between Others vs ST and ST vs SC. Within categories, the achievement of boys was significantly higher than girls.

Language

The data reveals that performance of ST boys was better than those of SC boys followed by boys of Others category and the differences in achievement were significant between Others vs SC and Others vs ST. There was no significant difference between the performance of girls amongst different categories. Within the categories, the achievement of boys was better than girls and the difference was significant in case of SC and ST students.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20 Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others (3)			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)											
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram - mar & Usage	Boys	223	53.29	13.45	260	53.34	13.16	1301	49.55	11.82	-3.74	-3.9	-3.79	-4.31	0.05	0.04
	Girls	211	49	12.86	288	48.76	13.89	1406	48.63	11.77	-0.37	-0.39	-0.13	-0.15	-0.24	-0.2
	Diff.		4.29			4.58			0.92							
	Total	434	51.21	13.32	548	50.93	13.73	2707	49.07	11.8	-2.14	-3.15	-1.86	-2.96	-0.28	-0.32
	CR Value		3.40			3.96			2.03							
Reading Compre- hension	Boys	223	52.08	20.19	260	52.69	21.8	1301	48.1	18.22	-3.98	-2.76	-4.59	-3.18	0.61	0.32
	Girls	211	47.77	19.32	288	47.92	22.53	1406	47.6	18.93	-0.17	-0.12	-0.32	-0.23	0.15	0.08
	Diff.		4.31			4.77			0.5							
	Total	434	49.98	19.86	548	50.18	22.3	2707	47.84	18.59	-2.14	-2.1	-2.34	-2.3	0.2	0.15
	CR Value		2.27			2.52			0.70							

The data reveals that there was no significant difference in achievement of girls of different categories. The achievement of SC and ST boys was significantly higher than those of Others category. The performance of boys in each category was better than girls and the differences in achievement were significant in each category.

Reading Comprehension

The performance of students in reading comprehension was similar to that of Grammar and Usage. With the only difference that in Others category. There was no significant differences in achievement between boys and girls.

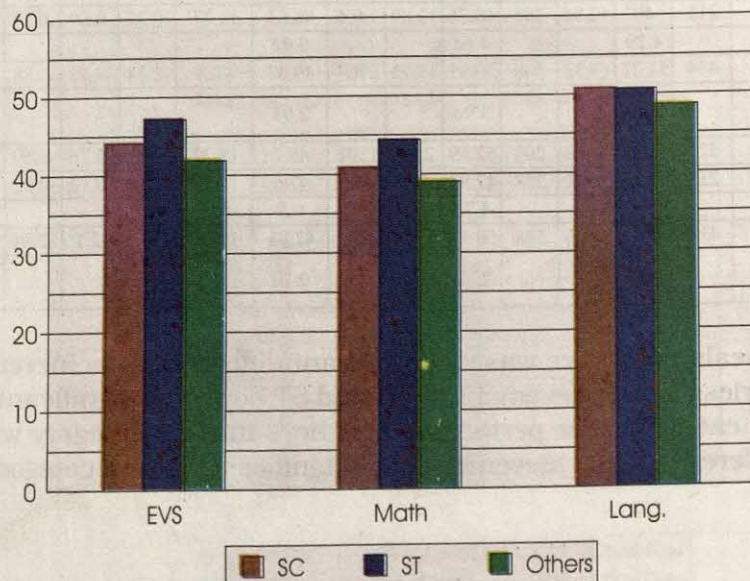
Areawise and Categorywise Achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 presents the areawise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students is discussed in the following paragraph:

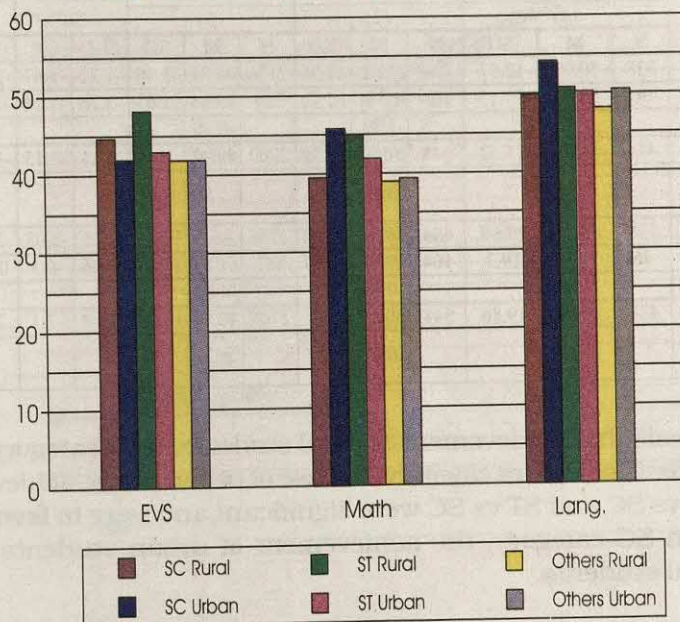
Table 21 Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	338	44.67	15.54	444	48.14	21.17	2156	41.86	15.45	-2.81	-3.09	-6.28	-5.93	3.47	2.64
	Urban	96	41.93	11.43	104	42.93	20.2	551	41.86	14.52	-0.07	-0.05	-1.07	-0.52	1	0.44
	Diff.		2.74			5.21			0							
	Total	434	44.07	14.76	548	47.15	21.07	2707	41.86	15.26	-2.21	-2.88	-5.29	-5.59	3.08	2.69
	CR Value		1.90			2.35			0.00							
Mathematics	Rural	338	39.47	15.53	444	44.96	20.11	2156	38.94	16.22	-0.53	-0.58	-6.02	-5.92	5.49	4.31
	Urban	96	45.75	16.21	104	41.9	18.51	551	39.34	16.04	-6.41	-3.58	-2.56	-1.32	-3.85	-1.57
	Diff.		-6.28			3.06			-0.4							
	Total	434	40.86	15.88	548	44.38	19.84	2707	39.02	16.18	-1.84	-2.24	-5.36	-5.94	3.52	3.09
	CR Value		-3.38			1.49			-0.52							
Language	Rural	338	49.78	12.99	444	50.75	14.69	2156	48.13	12.28	-1.65	-2.19	-2.62	-3.51	0.97	0.98
	Urban	96	54.17	13.84	104	50.22	14.28	551	50.48	10.67	-3.69	-2.49	0.26	0.18	-3.95	-1.99
	Diff.		-4.39			0.53			-2.35							
	Total	434	50.75	13.3	548	50.65	14.6	2707	48.61	12.01	-2.14	-3.15	-2.04	-3.07	-0.1	-0.11
	CR Value		-2.78			0.34			-4.47							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that there was no significant difference in achievement of urban students in different categories. The achievement of students of rural areas of ST category was highest followed by SC and Others category and the differences were significant in each category. The performance of rural students of ST category was better than ST students from urban areas and the difference in achievement was significant.

Mathematics

The data reveals that the achievement of ST students was better than SC students followed by students of Others category and the differences were significant. In rural areas, performance of ST students was significantly higher than students of Others and SC categories. The performance of rural students of SC category was significantly higher than urban students.

Language

The performance of rural students of ST category was better than students of SC category followed by Others category. The differences in achievement were significant in case of Others vs SC and Others vs ST. In urban areas, the performance of SC students was significantly better than ST students. Within categories, the achievement of urban students was significantly higher than rural students both in SC and Others category.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	338	50.09	12.57	444	51.2	13.95	2156	48.87	11.99	-1.22	-1.67	-2.33	-3.28	1.11	1.17
	Urban	96	55.12	15.13	104	49.81	12.73	551	49.86	11.03	-5.26	-3.26	0.05	0.04	-5.31	-2.67
	Diff.		-5.03			1.39			-0.99							
	Total	434	51.21	13.32	548	50.93	13.73	2707	49.07	11.8	-2.14	-3.15	-1.86	-2.96	-0.28	-0.32
	CR Value		-2.98			0.98			-1.85							
Reading Comprehension	Rural	338	49.25	19.99	444	50.01	22.42	2156	46.9	18.75	-2.35	-2.03	-3.11	-2.73	0.76	0.5
	Urban	96	52.57	19.3	104	50.9	21.87	551	51.51	17.51	-1.06	-0.5	0.61	0.27	-1.67	-0.57
	Diff.		-3.32			-0.89			-4.61							
	Total	434	49.98	19.86	548	50.18	22.3	2707	47.84	18.59	-2.14	-2.1	-2.34	-2.3	0.2	0.15
	CR Value		-1.48			-0.37			-5.44							

The data reveals that achievement of rural students of ST category was significantly higher than students of Others category. In case of urban areas, achievement differences between Others vs SC and ST vs SC were significant and were in favour of SC students in both cases. In SC category, the achievement of urban students was significantly higher than rural students.

Reading Comprehension

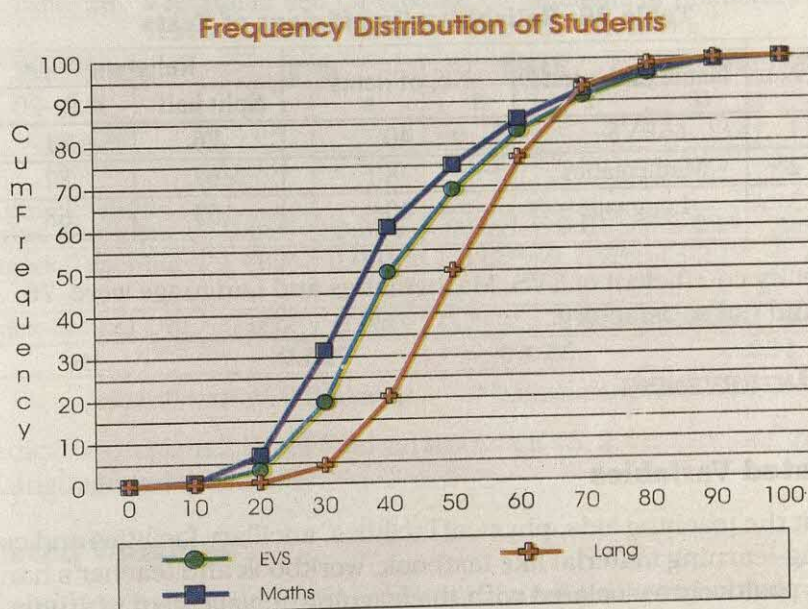
The data reveals that in rural areas, achievement of ST students was better than SC students followed by students of Others category and differences were significant between Others vs SC and Others vs ST students. In Others category, the performance of urban students was found to be significantly better than rural students. Overall performance in Grammar and Usage is better than comprehension.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their achievement level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	7	121	586	980	863	512	296	190	118	16
	cf	7	128	714	1694	2557	3069	3365	3555	3673	3689
	cf(%)	0.19	3.47	19.35	49.92	69.31	83.19	91.22	96.37	99.57	100
Math	f	25	232	908	1071	534	401	255	163	77	23
	cf	25	257	1165	2236	2770	3171	3426	3589	3666	3689
	cf(%)	0.68	6.97	31.58	60.61	75.09	85.96	92.87	97.29	99.38	100
Language	f	3	19	141	593	1094	989	612	192	44	2
	cf	3	22	163	756	1850	2839	3451	3643	3687	3689
	cf(%)	0.08	0.60	4.42	20.49	50.15	76.96	93.55	98.75	99.95	100

These graphs revealed that in all the three subjects, the distribution of scores overlapped the entire range from 0-100. The 30.69% students in EVS, 24.91% in Mathematics and 49.85% in Language scored more than 50% marks. Whereas 16.81% in EVS, 14.04% in Mathematics and 23.04% in Language scored more than 60% marks.



CLASSIFICATION OF TEST ITEMS

The distribution of items is given below :

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	4	4	5
25 to less than 50	Difficult	23	20	24
50 to less than 75	Average	12	9	9
75 to 100	Very Easy	1	7	0

About 2/3rd items in each subject fall in the difficult range. Comparatively more easy items are in language except items on sentence structure.

Table 25: Distribution of Test Items according to D.I.

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	29	24	32
Less than .30	Poor Discrimination	11	14	6

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	.76	.81
2	Mathematics	38	.67	.82
3	Language	40	.53	.68

The reliability co-efficient of EVS, Mathematics and Language were .76, .67 and .53 respectively and not satisfactory.

IMPACT OF INTERVENING

School Related Variables

It is found that the teaching aids, physical facilities, ancillary facilities and competency-based teaching-learning material like textbook, workbook and teacher's handbook and teaching aids positively associated with the learning achievement of students in EVS, Mathematics and Language. However only few of them are significantly related. Besides, PTR is negatively associated with criterion variables indicates that increase in class size adversely effect in the learning achievement of students. Similarly negative associated of competency based TLM in EVS shows that teachers could not understand how to use this material.

Table 27 Regression and Co-relation Coefficients of Predictors of School Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	27.309	-----	47.461	-----	40.217	-----
PTR	-0.050	-0.014	-0.070	-0.058	-0.050	-0.016
Com_Participation	0.904	0.033	0.125	0.057	0.020*	0.032
Teach-aid	0.918*	0.050	0.068*	0.040*	0.740*	0.154*
Physical facility	0.027	0.080	0.034	0.406	0.035*	0.014
Ancillary facility	0.036	0.050	0.341	0.075	0.900	0.110
Instructional time	0.010	0.010	0.061	0.017	0.340*	0.020
Working day	0.031	0.010	0.054	0.062	0.020	0.020
Index-Comp. TLM	0.190	0.070	0.062	0.006	-0.110	-0.043
R²	0.058		0.048		0.079	

*significant at 0.05 level

**significant at 0.01 level

The predictors explain 5.8% of total variance in EVS, 4.8% in Mathematics and 7.9% in Language.

Teacher Related Variables

The positive association of teaching aids and teaching style of teachers with the three criterions indicates that teacher's guides, dictionary, reference books, maps, globe, charts, science kits, homework and school organization to children have helped the students in learning the three subjects.

Table 28 Regression and Co-relation Co-efficients of Predictors of Teacher related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	60.051	-----	46.158	-----	51.032	-----
Index-Qualification	0.031	0.013	0.033	0.021	1.022*	0.039**
Index-Experience	0.086	0.055	0.625	0.011	0.234	0.033
Index-Teaching Aid	1.603*	0.091*	1.082**	0.126**	1.922**	0.130*
Index-School Org.	0.062	0.066	0.710*	0.011	0.029	0.005
R²	0.027		0.025		0.031	

*significant at 0.05 level

**significant at 0.01 level

The predictors explain 2.7% of total variance in EVS, 2.5% variance in Mathematics and 3.1% Language independently.

Pupil Related Variables

It is found that teaching-learning processes adopted in the schooling practices and academic assistance provided to the children by parents education and occupation and percentage attendance of students in school influence the learning achievement of children in EVS, Mathematics and Language. The three variables are positively associated with the criterion. This implies that active involvement of the teachers and family members in their day-to-day homework help the children in improving their learning skills in all the three subjects. Number of detentions in class and age of children are negatively associated with achievement in Mathematics and Language. This indicate that increase in these adversely effects an achievement of students.

Table 29 Regression and Co-relation Co-efficients of Predictors of Pupil-related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	45.090	-----	40.768	-----	58.709	--
Index-Ed & Occu	1.594**	0.095**	1.313	0.039*	1.168	0.085**
Index-Schooling	0.828*	0.088**	1.557**	0.107**	1.052	0.034
Index-TLP	3.218**	0.150**	3.812**	0.170**	2.524**	0.040
Age	0.208	-0.023	-0.042	-0.032*	-0.880*	-0.070**
Detention	-0.573*	-0.049**	-0.785**	-0.064**	-0.269	-0.022
Attendance	0.101**	0.023*	0.190	0.017	0.144	0.080
R²	0.037		0.039		0.048	

*significant at 0.05 level **significant at 0.01 level

The predictors explain 3.7% of total variance in EVS, 3.9% in Mathematics and 4.8% in Language.

COMPARISON OF ACHIEVEMENT BETWEEN DPEP vs NON-DPEP DISTRICTS

In Assam out of 4 districts, Karbi Anglong is the only DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30 Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non -DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	251	52.95	21.18	1533	41.82	14.35	-8.03
	Girls	235	54.7	21.18	1670	40.73	15.1	-9.77
	Diff.		-1.75			1.09		
	Total	486	53.8	21.17	3203	41.25	14.75	-12.61
	CR Va lue		-0.91			2.09		
Mathe - matics	Boys	251	51.36	17.47	1533	40.03	16.21	-9.62
	Girls	235	45.66	21.44	1670	37.54	15.67	-5.6
	Diff.		5.7			2.49		
	Total	486	48.6	19.68	3203	38.73	15.98	-10.54
	CR Value		3.2			4.41		
Language	Boys	251	58.55	14.51	1533	48.69	11.58	-10.24
	Girls	235	53.65	16.27	1670	47.56	11.87	-5.53
	Diff.		4.9			1.13		
	Total	486	56.18	15.56	3203	48.1	11.74	-10.98
	CR Value		3.5			2.73		

The data reveals that in all the three subjects, the achievement of students of DPEP districts was significantly better than their counterparts in non-DPEP districts.

HARD SPOT OF LEARNING

In EVS, items No. 21,24,26,36 were correctly responded to by less than 25% of students, and were found very difficult. But, 23(58%) items were found difficult. The hard spot of learning in EVS was found in identification of a state on the map, identification of natural features of the country, climatic conditions at varying attitudes, understanding a longitude and latitude, govt. functionaries and knowledge about British rule, knowledge of postal services and UN days. Understanding of eclipse and solar system, planets, etc., composition of air, effect of weather conditions on human bodies, understanding of deficiency diseases, carriers of diseases, knowledge of function of fins of a fish and conservation of wild animals.

In Language, items 11,14,18,20 were found very difficult and 20(50%) items were found difficult. This hard spots in language were identified and vocabulary, structure, comprehension of instructions and time tables, and comprehension of information passage and of story.

In Mathematics, 5(12.5%) items were correctly responded to by less than 25% students and found very difficult. Similarly, 24(63%) items were correctly responded by less than 50% of students and found difficult. The hard spots in mathematics was identified as triangle according to angles, word problems fraction on comparison, conversion from one unit to other, commercial mathematics, subtraction of fraction, ascending and descending order and geometry.

FINDINGS

- Number of female teachers was more than male teachers in urban sampled schools.
- Not a single school having primary classes was included from urban area.
- Dustbin and musical instrument were available in less than one third of sampled schools.
- Computer were more available in less than 5% sampled schools.
- Competency-based teaching materials were available only in few schools till the year 2001.
- Girls were receiving less facilities under incentive schemes as compared to boys except mid day meal schemes.
- Parent Teacher Association were more in urban schools than rural schools.
- Female teachers were more in urban schools than rural schools.
- Average teachers per school was more in urban schools than rural schools.
- Pupil-Teacher ratio was higher in urban schools than rural schools.
- The percentage of female graduate teachers was more than their counterparts.
- The percentage of teachers who studied language upto degree level was more than their counterparts.
- Majority of teachers were diploma/certificate in primary/elementary education holder.
- In rural areas, teaching aids were more available to teacher than their urban counterparts.
- DIET organised maximum in-service programmes during last three years.
- Approximately one half parents were educated upto secondary level.
- Majority of mothers were house wives.
- Students get more help from father and mother in urban areas. In rural areas, students let more help from father and elder brother/sister than others.
- Achievement of girls was better than boys across the subjects areawise and also categorywise
- Performance of rural students was better than their counterparts in urban areas.
- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In rural areas, performance of ST students was better than SC student followed by students of Others category.
- In urban areas, performance of students of Others category was better than SC students.
- 75% students have same medium as medium of instruction in the schools.
- Achievement of DPEP districts students was significantly better than non DPEP districts students in all three subjects.
- Average number of working days in school was 197 days.
- Active involvement of teachers and family members in day-to-day homework have helped the children in improving their learning skills in the three subjects.
- PTR is negatively associated with achievement of students. Indicates that increase in class size adversely effect in learning achievement of students.
- Teaching aids and Teaching style of teachers are positively associated with achievement of students.

INTRODUCTION

The state of Bihar, as a separate province came into existence on 1st April, 1936. As Bihar has got a great history down to Vedas, Purans and was the main scene of activities of Buddha and 24 Jain Tirthankars. One of the major states of Indian union, Bihar as bounded on the north by Nepal, on the east by West Bengal, West by Uttar Pradesh and South by Jharkhand. There are total 37 districts. Hindi is the principal language for the state.



As per the Census 2001, the total Literacy for the state is 47.53% which is lowest among the states. For male it is 60.30% and 33.57% for female. Likewise, the Gross Enrolment Ratio which is 61 girls for 100 boys for the state is also a matter of concern. The state has total 53,697 primary schools with 1,15,486 teachers and 1,04,73,252 pupils enrolled in those schools with a pupil teacher ratio of 63:1 (Selected Educational Statistics, 2001).

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 84 schools were selected from Gaya and Sitamarhi districts out of four sampled districts. Both districts are DPEP districts. The survey was not completed in remaining two selected districts, Jamui and Bhagalpur. Out of the total sampled schools, 34 schools were from Gaya and remaining 50 schools from Sitamarhi.

Areawise and managementwise distribution of schools is shown in the Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	69	69	100	0	0	0	0
Urban	15	15	100	0	0	0	0
Total	84	84	100	0	0	0	0

Teachers

A total of 248 teachers were sampled from 84 schools. Out of 248 teachers, 182 were male and 66 were female teachers. Areawise 203 teachers were from rural areas and 45 teachers were from urban areas.

Table 2: Categorywise and Genderwise distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	15	9.2	0	0	75	46.01	73	44.79	163
	Female	2	5	0	0	11	27.5	27	67.5	40
	Total	17	8.37	0	0	86	42.36	100	49.26	203
Urban	Male	2	10.53	0	0	11	57.89	6	31.58	19
	Female	2	7.69	0	0	9	34.62	15	57.69	26
	Total	4	8.89	0	0	20	44.44	21	46.67	45
Total	Male	17	9.34	0	0	86	47.25	79	43.41	182
	Female	4	6.06	0	0	20	30.3	42	63.64	66
	Total	21	8.47	0	0	106	42.74	121	48.79	248

Table 2 shows that not a single Scheduled Tribe teacher figured in the sampled. The percentage of male teachers was higher than female teachers in SC and OBC categories.

Students

A total number of 2,239 students appeared in each of the three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Gaya	Rural	354	267	621
	Urban	188	201	389
	Total	542	468	1010
Sitamarhi	Rural	762	422	1184
	Urban	7	38	45
	Total	769	460	1229
Total	Rural	1116	689	1805
	Urban	195	239	434
	Total	1311	928	2239

Out of 2,239 students, 1,805 students were from rural areas and remaining 434 students were from urban areas. Out of the total sample, 1,311 were boys of and 928 were girl students. The urban areas of Sitamarhi district contained a sample of only 45 (7 boys + 38 girls) students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre-primary School Attached.		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	23	33.33	8	11.59	61	88.41	0	0
Urban	8	53.33	1	6.67	14	93.33	0	0
Total	31	36.9	9	10.71	75	89.29	0	0

Table 4 indicates that out of 69 rural sampled schools, 11.59% in primary, 88.41% in elementary. Further, approximately 12% schools in rural areas and 7% schools in urban areas were only primary schools. No primary school was attached with secondary school.

Facilities related to teaching-learning process

It was observed that children's books were available in all schools in Sitamarhi district. Further, maps, globes, charts and reference books/dictionaries/encyclopedias were available in more than 60% schools. However, magazines, journals and newspapers

were available only in 15% schools. Overall, facilities related to teaching-learning process were more available in Gaya district than Sitamarhi district.

Infrastructural facilities

It was observed that blackboards were available almost in all schools (99%). Musical instruments were available in less than 18% schools. Further, school bell, chairs for teachers, chalk and duster were available in 96% or more schools. Water pitcher, ladel and glasses were available in 88% schools. However, dustbin was available in only 31% schools.

Auxillary Facilities

Computer and TV were not available even in a single school. The electric connection for the school was available only in 7% schools. However, safe drinking water facility was available in 87% schools. Besides, toilet facilities were available in 79% schools.

Competency-based Teaching Materials

Information gathered shows that, out of 84 schools, competency-based textbooks were available in more schools than workbooks, teachers handbook. Workbooks were available in lesser number of schools as compared with remaining. However, teaching-aids were available in approximately 25% of schools.

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	2662	1853	25	2	5598	4536	2099	1578	10384	7969
	%	25.64	23.25	0.24	0.03	53.91	56.92	20.21	19.80	100	100
Free uniform	N	0	98	0	0	0	0	0	0	0	98
	%	0	100	0	0	0	0	0	0	0	100
Free textbooks	N	2399	2251	0	0	1607	4790	259	1349	4265	8390
	%	56.25	26.53	0	0	37.68	57.09	6.07	16.08	100	100
Scholarship for regular attendance	N	463	322	0	0	763	504	300	205	1526	1031
	%	30.34	31.23	0	0	50.00	48.88	19.66	19.88	100	100
Other Schemes	N	111	65	0	0	194	87	66	34	371	186
	%	29.92	34.95	0	0	52.29	46.77	17.79	18.28	100	100

Various schemes like mid-day meal, free textbook and scholarship for regular attendance were available to both boys and girls across the categories through free uniform were available only for SC girls. In case of mid-day meal, 53.91% boys from OBC and 56.92% girls from same category were more benefited. However, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls from OBC and SC categories.

Instructional Time

Average number of working days in school was 212 days. Schools were having 7 periods in a day of 42 minutes.

Educational Committees

The data provided in Table 6 reveals that out of total 84 sampled schools, 68(80.95%) schools were having Village Education Committees (VEC). School Management Committee (SMC) was observed in 6(7.14%) schools and Parent Teacher Association (PTA) was observed in 11(13.01%) schools. But only 1(1.19%) schools have Area Education Committee (AEC).

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	68	13	81
	%	98.55	86.67	96.43
AEC	N	1	0	1
	%	1.45	0	1.19
SMC	N	3	3	6
	%	4.35	20	7.14
PTA	N	9	2	11
	%	13.04	13.33	13.1

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	69	308	80.84	73	19.16	381	6	67
Urban	15	51	37.78	84	62.22	135	9	54
Total	84	359	69.57	157	30.43	516	6	65

Table 8 shows that overall number of male teachers were more than female teachers. However, this trend was reverse in Sitamarhi district. The average number of teachers per school in rural and urban area were 5 and 9. Pupil teacher ratio was 67:1 in rural schools and 54:1 in urban schools.

Educational Qualification

Table 8 shows that the percentage of male and female teachers holding PG degree was 19% and 24%. The percentage of female teachers holding graduate degree was also more than male teachers. Further, approximately 61% teachers were either graduates or post-graduates. Besides, none of the teacher had qualification below Class X.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	38	20.88	32	17.58	77	42.31	35	19.23	182
Female	0	0	13	19.7	7	10.61	30	45.45	16	24.24	66
Total	0	0	51	20.56	39	15.73	107	43.15	51	20.56	248

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to the level upto which they had studied Mathematics, Science, Language and Social Science.

Table 9: The Level upto which various Subjects Studied

District	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	54	29.67	82	45.05	30	16.48	16	8.79	182
	Female	28	42.42	32	48.48	6	9.09	0	0	66
	Total	82	33.06	114	45.97	36	14.52	16	6.45	248
Science	Male	32	17.58	91	50	38	20.88	21	11.54	182
	Female	18	27.27	38	57.58	8	12.12	2	3.03	66
	Total	50	20.16	129	52.02	46	18.55	23	9.27	248
Language	Male	3	1.65	56	30.77	46	25.27	77	42.31	182
	Female	2	3.03	16	24.24	13	19.7	35	53.03	66
	Total	5	2.02	72	29.03	59	23.79	112	45.16	248
Social Science	Male	11	6.04	115	63.19	25	13.74	31	17.03	182
	Female	5	7.58	45	68.18	5	7.58	11	16.67	66
	Total	16	6.45	160	64.52	30	12.1	42	16.94	248

The data reveals that the percentage of male teachers who studied subjects upto higher secondary or degree level was more than female teachers except in Language wherein percentage of female degree holders was more. The percentage of female teachers who studied all school subjects below Class X or upto Class X was more than male teachers except in Language where the percentage of male teachers was higher.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualification is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
84	Male	138	21	2
	Female	59	11	0
	Total	197	32	2

Out of the sampled teachers, 138 male and 59 female teachers were having diploma certificate in Primary/Elementary Education and 21 male and 11 female teachers were having B.Ed. degree and only 2 male teachers having M.Ed. degree.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. Further, teachers guide, dictionaries, maps, globes, charts, flash cards, science kits, mathematics kits and others were more available to teachers in urban schools than teachers in rural schools. However, books other than textbooks were more available to teachers teaching in rural schools. In general, teaching aids were available to more male teachers in rural schools and female teachers in urban schools.

In-service Training

The account of training programme organised by various agencies for in-service teachers during the last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers trained
1. School Complex	N	11
	%	4.44
2. Block Resource Centre	N	199
	%	80.24
3. Teacher Resource Centre	N	3
	%	1.21
4. Cluster Resource Centre	N	6
	%	2.42
5. DIET	N	79
	%	31.85
6. SCERT	N	0
	%	0
7. Others	N	7
	%	2.82

The inservice training programme were organised in various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Maximum teachers attended the programme conducted by Block Resource Centre and DIET. Few teachers attended the programme by CRC and School Complex.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	42
2. Content Enrichment	112
3. Production of Instructional Material	3
4. Use of Instructional Material	2
5. Assessment of Pupil Learning	3
6. Competency based Teaching Learning	164
7. Activity based Joyful Learning	46
8. Others	24

Out of 248 sampled teachers only 7 teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service training programme was almost same. However, percentage of teachers in urban area was more than teachers teaching in rural schools. Besides, all female teachers in rural schools attended in-service training programmes. However, the same was not true for female teachers in urban schools.

During in-service training programmes number of themes were covered i.e., general training programme, content enrichment, production of instructional material, use of instructional material, assessment of pupil learning, competency based teaching-learning, activity-based joyful learning and others. The maximum number of programmes were organised on Competency-based Teaching-Learning and it was followed by Content Enrichment Programmes. Minimum programmes i.e., only two, were conducted on 'Use of Instructional Materials' as given in Table 12.

The effectiveness of various training programme is given in Table 13.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	108	76	93	91
	%	44.81	31.53	38.59	37.76
Average	N	130	157	143	139
	%	53.94	65.14	59.33	57.68
Low	N	3	8	5	11
	%	01.24	03.32	02.07	04.56

It is evident that only 45% teachers training programmes were highly effective in terms of utility of knowledge. However, these were rated as average by approximately 54% teachers. Similarly, impact of these training programmes was rated as average by approximately 58 per cent to 65 per cent teachers in different subjects. The improvement in teaching skills in all subjects was rated as high by 32 per cent to 39 per cent teachers.

Academic Assistance received from Various Sources

In the state various sources provide assistance to teachers to improve the quality of education. Approximately 50% of the teachers were getting continuous assistance from Head of the school in rural and urban areas. Cluster Resource Coordinator, Block Resource Coordinator and DIET teachers were providing assistance 'sometimes', to a large number of teachers.

Students Profile

Profile of the sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 67% students in the school was same as the language spoken at home.

Educational Level of Parents

Educational level of the student's parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	46	2.05	35	1.56
1. Illiterate	396	17.69	1104	49.30
2. Literate	269	12.01	276	12.33
3. Primary	200	08.93	240	10.72
4. Secondary	800	35.73	388	17.33
5. Sr. Secondary	197	8.80	46	2.05
6. Degree and above	198	8.82	31	1.38
7. Donot Know/Cannot say	133	5.94	119	5.31

Table 14 indicates that approximately 18% fathers and 49% mothers of the students were illiterate. Only approximately 9% fathers and 1% mothers were having degree or higher educational qualification. Further, majority of the remaining parents were educated either upto primary or secondary level. Educational level of mothers was poorer than father.

Occupation of Parents

Information regarding occupation of father, mother and guardian of the students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	59	13	72	62	4	66
Household/ Housewife	3	0	3	1650	395	2045
Farmer	703	26	729	7	0	7
Poultry farming	5	1	6	1	0	1
Agricultural labour	264	18	282	27	3	30
Picking forest produce	2	1	3	28	0	28
Domestic Servent	7	4	11	1	1	2
Street Vender	26	38	64	3	4	7
Manual unskilled worker	39	23	62	4	1	5
Skilled worker	230	126	356	9	17	26
Clerical worker	45	19	64	2	0	2
Shopkeeper	203	101	304	2	1	3
Employer	21	14	35	0	0	0
Manager/Senior Officer	75	23	98	6	3	9
Others	123	27	150	3	5	8

In rural areas majority of mothers were housewives and fathers were farmers. Like wise in urban areas also, majority of mothers were housewives but fathers were skilled workers. Only few mothers were managers/senior officers, and in other occupations. In decreasing order mothers worked as house hold/house wife, agricultural labour, picking forest produces, skilled worker, manager/senior officer, others, farmer/street vendor, manual unskilled worker, domestic servant/clerical worker and domestic servant/manual unskilled worker/shop keeper. Also in decreasing order fathers worked as farmer, skilled worker, shop keeper, agricultural labour, others officer, street vendor, clerical worker, manual unskilled worker, manager/senior employer, domestic servant, poultry farming, house hold worker and picking forest produces.

Academic Assistance

The information collected from the students regarding academic assistance has been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	534	364	72	122	606	486
	%	47.85	52.83	36.92	51.05	46.22	52.37
Mother	N	242	180	38	79	280	259
	%	21.68	26.12	19.49	33.05	21.36	27.91
Elder Brother/Sister	N	277	206	64	69	341	275
	%	24.82	29.9	32.82	28.87	26.01	29.63
Others	N	123	84	25	52	148	136
	%	11.02	12.19	12.82	21.76	11.29	14.66

Girls, both in rural and urban areas, were getting more help than boys from all sources except boys in urban areas were getting more help from mothers than girls.

Attendance

Attendance plays an important role in learning. It is observed that the attendance of girls is better than boys in urban areas. However, the attendance of boys is better than girls in rural areas.

STUDENTS ACHIEVEMENT

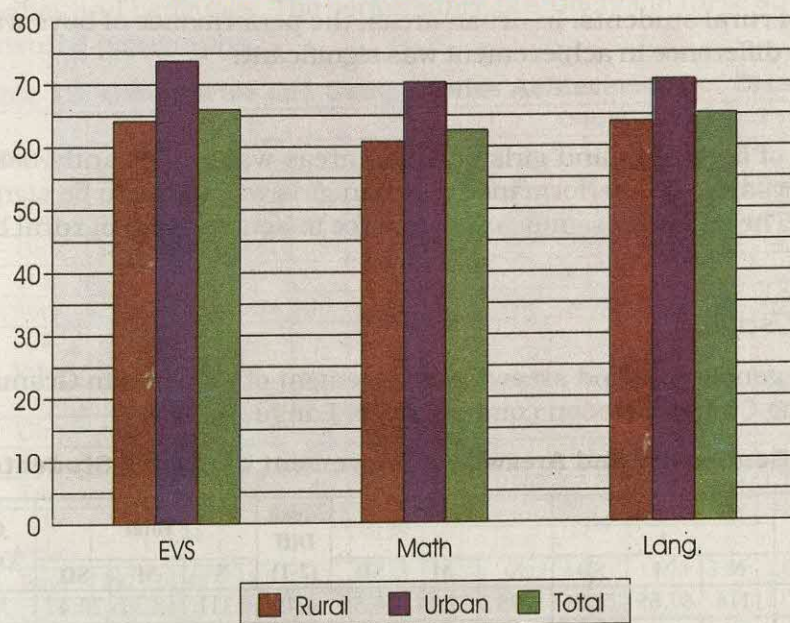
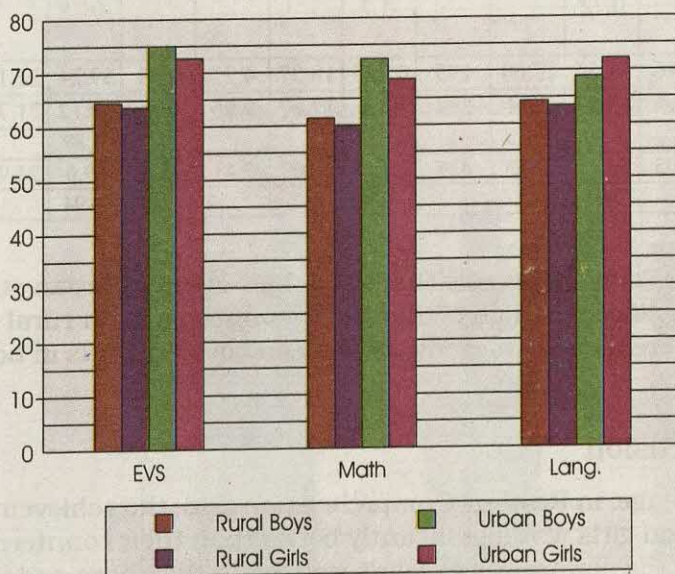
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Bihar. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1116	64.43	22.79	195	75.01	12.64	10.58	1311	66.01	21.91	9.33
	Girls	689	63.58	23.84	239	72.64	14.6	9.06	928	65.91	22.19	6.91
	Diff.		0.85			2.37				0.1		
	Total	1805	64.11	23.2	434	73.7	13.79	9.59	2239	65.97	22.02	11.18
	CR Value		0.75			1.81				0.11		
Mathe - matics	Boys	1116	61.35	24.11	195	72.34	18.07	10.99	1311	62.98	23.63	7.42
	Girls	689	59.87	23.86	239	68.54	17.49	8.67	928	62.1	22.7	5.97
	Diff.		1.48			3.8				0.88		
	Total	1805	60.78	24.02	434	70.25	17.83	9.47	2239	62.62	23.25	9.23
	CR Value		1.28			2.21				0.89		
Langu - age	Boys	1116	64.23	19.49	195	68.81	15.24	4.58	1311	64.91	18.98	3.7
	Girls	689	63.4	19.61	239	72.15	14.95	8.75	928	65.65	18.9	7.16
	Diff.		0.83			-3.34				-0.74		
	Total	1805	63.92	19.53	434	70.65	15.15	6.73	2239	65.22	18.95	7.82
	CR Value		0.88			-2.29				-0.91		

Mean Achievement of Students-Areawise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data given in Table 17 reveals that the performance of urban students, both boys and girls, was better than their counterparts in rural areas and the differences in achievement were significant. However, there was no significant difference in achievement between boys and girls within both rural and urban areas.

Mathematics

As in EVS, the achievement of urban students, both boys and girls, was significantly better than that of rural students. In urban areas, the performance of boys was better than girls and the difference in achievement was significant.

Language

The achievement of both boys and girls of urban areas was significantly better than their rural counterparts. The performance of urban girls was found to be significantly better than boys. There was no significant difference in achievement of rural boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram - mar & Usage	Boys	1116	67.65	21.01	195	72.14	16.55	4.49	1311	68.32	20.47	3.35
	Girls	689	66.91	21.24	239	74.95	17.72	8.04	928	68.98	20.68	5.73
	Diff.		0.74			-2.81				-0.66		
	Total	1805	67.37	21.1	434	73.69	17.24	6.32	2239	68.59	20.55	6.55
	CR Value		0.72			-1.7				-0.75		
Reading Comp - rehensio n	Boys	1116	58.54	22.64	195	63.25	18.37	4.71	1311	59.24	22.12	3.18
	Girls	689	57.55	22.4	239	67.5	17.67	9.95	928	60.12	21.71	6.98
	Diff.		0.99			-4.25				-0.88		
	Total	1805	58.16	22.55	434	65.59	18.09	7.43	2239	59.6	21.95	7.3
	CR Value		0.91			-2.44				-0.94		

The data posted in Table 18 reveals that the achievement of urban students, both boys and girls was significantly higher than their counterparts in rural areas. There was no significant difference in achievement between boys and girls in both rural and urban areas.

Reading Comprehension

As in Grammar and Usage, in Reading Comprehension also, the achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. In urban areas, the performance of girls was better than boys and the difference in achievement was significant.

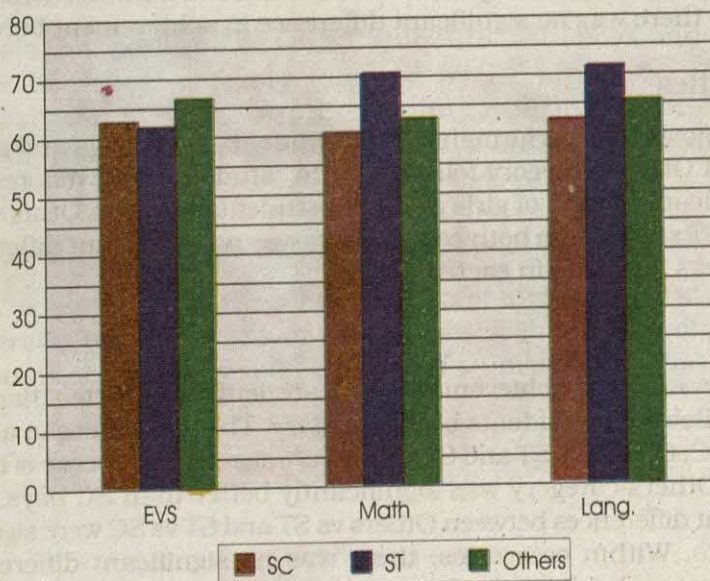
Genderwise and Categorywise Achievement

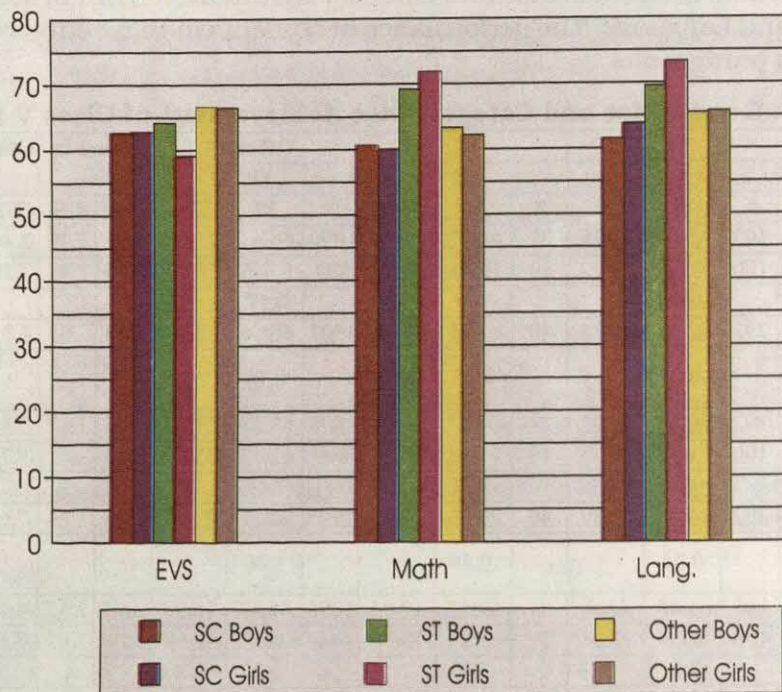
Table 19 illustrates the genderwise and category wise achievement of students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		ST vs SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	192	62.62	21.35	21	64.17	21.23	1098	66.63	21.98	4.01	2.39	2.46	0.53	1.55	0.32
	Girls	100	62.8	19.62	19	59.08	20.53	809	66.46	22.49	3.66	1.73	7.38	1.55	-3.72	-0.73
	Diff.		-0.18			5.09			0.17							
	Total	292	62.68	20.74	40	61.75	20.8	1907	66.56	22.19	3.88	2.95	4.81	1.45	-0.93	-0.27
	CR Value		-0.07			0.77			0.16							
Mathe matics	Boys	192	60.62	23.02	21	69.17	23.61	1098	63.28	23.72	2.66	1.47	-5.89	-1.13	8.55	1.58
	Girls	100	60	19.66	19	71.88	20.14	809	62.13	23.07	2.13	1	-9.75	-2.08	11.88	2.37
	Diff.		0.62			-2.71			1.15							
	Total	292	60.41	21.89	40	70.46	21.79	1907	62.79	23.44	2.38	1.71	-7.67	-2.2	10.05	2.73
	CR Value		0.24			-0.39			1.06							
Langu- age	Boys	192	61.48	18.9	21	69.52	19.84	1098	65.43	18.93	3.95	2.67	-4.09	-0.94	8.04	1.77
	Girls	100	63.8	17.21	19	73.29	13.36	809	65.7	19.18	1.9	1.03	-7.59	-2.42	9.49	2.7
	Diff.		-2.32			-3.77			-0.27							
	Total	292	62.28	18.35	40	71.31	16.97	1907	65.54	19.03	3.26	2.81	-5.77	-2.12	9.03	3.12
	CR Value		-1.06			-0.71			-0.31							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that the performance of boys and students of Others category was significantly better than SC students. There was no significant difference in achievement of students (both boys and girls) between Others vs ST and ST vs SC students. Within categories, there was no significant difference in achievement between boys and girls.

Mathematics

The data shows that performance of ST students (both boys and girls) was better than students of Others category followed by SC students. The differences in achievement were significant in case of girls and total students between Others vs ST and ST vs SC favouring ST students in both cases. There was no significant difference in achievement between boys and girls in each category.

Language

The data reveals that achievement of ST students was better than students of Others category followed by students of SC category. The differences in achievement between Others vs SC, Others vs ST and ST vs SC were significant. In case of boys the performance of boys of Others category was significantly better than SC boys. In case of girls, the achievement differences between Others vs ST and ST vs SC were significant and favoured ST students. Within categories, there was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram - mar & Usage	Boys	192	63.94	20.4	21	73.52	24.61	1098	68.99	20.31	5.05	3.17	-4.53	-0.84	9.58	1.72
	Girls	100	67.28	18.98	19	77.47	10.43	809	68.99	21.03	1.71	0.84	-8.48	-3.39	10.19	3.34
	Diff.		-3.34			-3.95			0							
	Total	292	65.08	19.95	40	75.4	19.1	1907	68.99	20.61	3.91	3.1	-6.41	-2.1	10.32	3.19
	CR Value		-1.39			-0.67			0.00							
Reading Comprehension	Boys	192	57.4	22.9	21	62.86	16.94	1098	59.49	22.06	2.09	1.17	-3.37	-0.9	5.46	1.35
	Girls	100	58	21.7	19	66.32	23.15	809	60.23	21.68	2.23	0.97	-6.09	-1.14	8.32	1.45
	Diff.		-0.6			-3.46			-0.74							
	Total	292	57.6	22.46	40	64.5	19.94	1907	59.8	21.89	2.2	1.56	-4.7	-1.47	6.9	2.02
	CR Value		-0.22			-0.53			-0.73							

The achievement of ST students, both boys and girls, was better than their counterparts in Others category followed by SC category students. In case of boys, difference in achievement between Others vs SC was significant. In case of girls, these differences were significant between Others vs ST and ST vs SC favouring ST students. Considering total students in each categories, the differences in achievement between Others vs SC, Others vs ST and ST vs SC were all significant. There was no significant difference between boys and girls in each category.

Reading Comprehension

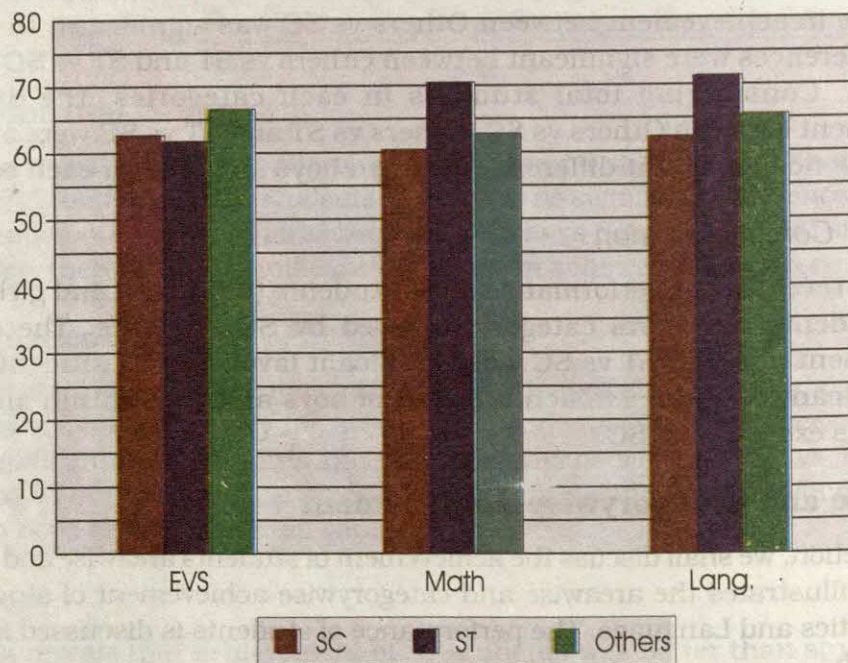
The data reveals that performance of ST students (both boys and girls) was better than students of Others category followed by SC students. The difference in achievement between ST vs SC was significant favouring ST students. There was no significant difference in achievement of boys and girls within and across the categories except ST vs SC.

Areawise and Categorywise Achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 illustrates the areawise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	243	61.18	21.62	19	50.66	22.68	1543	64.73	23.37	3.55	2.35	14.07	2.69	-10.52	-1.95
	Urban	49	70.1	13.6	21	71.79	12.55	364	74.3	13.83	4.2	2.03	2.51	0.89	1.69	0.5
	Diff.		-8.92			-21.13			-9.57							
	Total	292	62.68	20.74	40	61.75	20.8	1907	66.56	22.19	3.88	2.95	4.81	1.45	-0.93	-0.27
	CR Value		-3.74			-3.59			-10.21							
Mathematics	Rural	243	58.95	22.67	19	66.76	28.56	1543	61	24.16	2.05	1.3	-5.76	-0.88	7.81	1.16
	Urban	49	67.67	15.81	21	73.81	12.93	364	70.39	18.31	2.72	1.11	-3.42	-1.15	6.14	1.7
	Diff.		-8.72			-7.05			-9.39							
	Total	292	60.41	21.89	40	70.46	21.79	1907	62.79	23.44	2.38	1.71	-7.67	-2.2	10.05	2.73
	CR Value		-3.25			-0.99			-8.24							
Language	Rural	243	62.19	18.59	19	69.61	21.35	1543	64.12	19.64	1.93	1.49	-5.49	-1.12	7.42	1.47
	Urban	49	62.7	17.26	21	72.86	12.07	364	71.59	14.72	8.89	3.44	-1.27	-0.46	10.16	2.82
	Diff.		-0.51			-3.25			-7.47							
	Total	292	62.28	18.35	40	71.31	16.97	1907	65.54	19.03	3.26	2.81	-5.77	-2.12	9.03	3.12
	CR Value		-0.19			-0.58			-8.13							

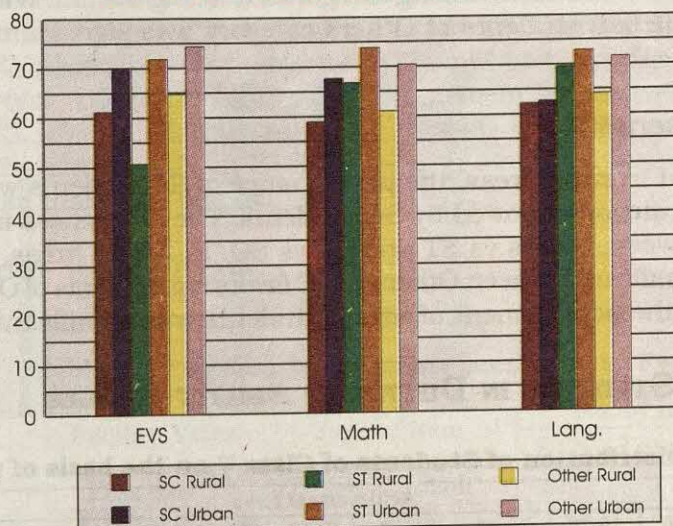
Mean Achievement of Students-Categorywise

Environmental Studies

The data reveals that in rural areas, the performance of students of Others category was better than SC followed by ST students. The differences in achievement were significant between Others vs SC and Others vs ST. In urban areas, performance of students of Others category was better than ST followed by SC students and the difference in achievement was significant only between Others vs SC. The performance of urban

students in each category was better than rural students and the differences in achievement were significant in each case.

Mean Achievement of Students-Areawise



Mathematics

The data reveals that there was no significant difference in achievement of rural and urban students across the categories. Within categories, the achievement of urban students was better than rural students and the differences were significant between SC and Others category.

Language

The data reveals that in rural areas, there was no significant difference in achievement across the categories. In urban areas, the difference in achievement was significant only between Others vs SC favouring students of Others category. In Others category, the achievement of urban students was significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Rural	243	65.1	20.35	19	70.11	23.83	1543	67.69	21.17	2.59	1.83	-2.42	-0.44	5.01	0.89
	Urban	49	64.98	18.05	21	80.19	12.23	364	74.48	17.03	9.5	3.48	-5.71	-2.03	15.21	4.1
	Diff.		0.12			-10.08			-6.79							
	Total	292	65.08	19.95	40	75.4	19.1	1907	68.99	20.61	3.91	3.1	-6.41	-2.1	10.32	3.19
	CR Value		0.04			-1.66			-6.51							
Reading Compre-hension	Rural	243	57.34	22.43	19	68.77	20.01	1543	58.16	22.58	0.82	0.53	-10.61	-2.29	11.43	2.38
	Urban	49	58.91	22.83	21	60.64	19.54	364	66.78	17.08	7.87	2.33	6.14	1.41	1.73	0.32
	Diff.		-1.57			8.13			-8.62							
	Total	292	57.6	22.46	40	64.5	19.94	1907	59.8	21.89	2.2	1.56	-4.7	-1.47	6.9	2.02
	CR Value		-0.44			1.30			-8.10							

The data reveals that there was no significant difference in achievement of rural students across the categories. In urban areas, the performance of students of ST category was better than students of Others category followed by SC category students and the differences in achievement among categories were significant. Within categories, the achievement of urban students of Others category was significantly better than rural students.

Reading Comprehension

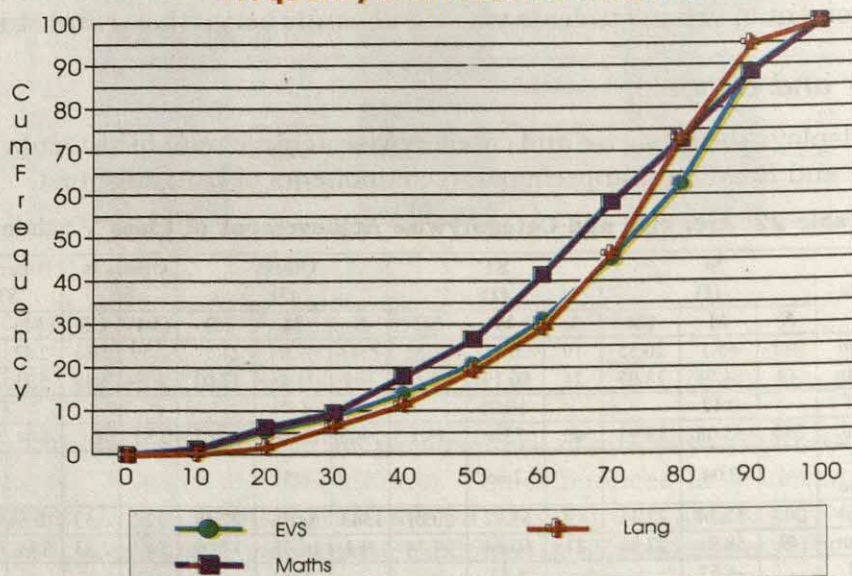
The data reveals that in rural areas, the performance of ST students was better than students of Others category followed by SC students. The differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, differences in achievement were significant between Others vs SC favouring students of Others category. In Others category, the achievement of urban students was significantly better than rural students.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	14	105	73	122	152	230	314	388	585	256
	cf	14	119	192	314	466	696	1010	1398	1983	2239
	cf(%)	0.63	5.31	8.58	14.02	20.81	31.09	45.11	62.44	88.57	100
Math	f	30	112	75	186	193	334	375	323	349	262
	cf	30	142	217	403	596	930	1305	1628	1977	2239
	cf(%)	1.34	6.34	9.69	18.00	26.62	41.54	58.28	72.71	88.30	100
Language	f	6	35	110	111	176	219	384	596	491	111
	cf	6	41	151	262	438	657	1041	1637	2128	2239
	cf(%)	0.27	1.83	6.74	11.70	19.56	29.34	46.49	73.11	95.04	100

Frequency Distribution of Students



The figures posted in Table 23 revealed that in all the three subjects, the distribution of scores covered the entire range from 0-100 percent. In all the three subjects, more students were in higher range. The least number of cases in EVS (14), in Mathematics (30) and in Language (6) were all in the range 0-10 percent. The maximum number of cases in EVS (585), in Mathematics (375) and in Language (596) were in the range 80-90 percent, 60-70 percent and 70-80 percent respectively. The 79.91% students in EVS, 73.38% in Mathematics and 84.44% in Language scored more than 50% marks. Whereas 68.91% in EVS, 58.46% in Mathematics and 70.66% in Language scored more than 60% marks.

DISTRIBUTION OF TEST ITEMS

Test items groups according to the facility values are given in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	1	0
25 to less than 50	Difficult	2	4	8
50 to less than 75	Average	30	23	24
75 to 100	Very Easy	7	12	6

More than 60% items have average facility value. Difficult or very difficult items are very few.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	3	1	5
.30 to less than .70	Average Discrimination	36	33	33
Less than .30	Poor Discrimination	1	6	0

Nearly 80% items are of average discrimination index. Few items in Language are poorly discriminations. These are either very difficult or very easy.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of tests

S. No.	Name of the test	No. of items	Reliability	
			Spelt half	K.R.-20
1	EVS	40	0.81	0.91
2	Mathematics	38	0.78	0.91
3	Language	40	0.76	0.88

Most of the items were discriminating adequately. The reliability co-efficient for EVS, Language and Mathematics were 0.91, 0.91 and 0.88 respectively.

IMPACT OF INTERVENING VARIABLES

School Related Variables

Community participation, competency based teaching learning material, physical and ancillary facilities in school influence the learning achievement of the children in the three subjects. The positive association of these variables with the criterion indicates that the above mentioned facilities help the children in enhancing their learning achievement. Negative association of pupil -teacher ratio with the criterion indicates children in large size class perform poorly.

Table 27: Regression and Correlation Coefficients of Predictors of School related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	81.648	-----	85.675	-----	92.028	-----
PTR	0.436	0.041	0.578	0.043	-0.026	-0.018
Com_Participation	0.544	0.078	0.550	0.029	0.224	0.023
Teach-aid	0.544	0.078	0.550	0.029	0.224	0.023
Physical facility	0.179	0.065	0.157	0.102	0.791	0.075
Ancillary facility	0.900	0.090	0.153	0.191	0.516	0.153
Instructional time	0.037	0.091	0.038*	.045	0.028	0.018
Working day	0.062	0.032	0.077	0.021	0.078	0.010
Index-Comp. TLM	1.080*	0.104*	0.077	0.104	0.242	0.120
R²	0.067		0.095		0.083	

*significant at 0.05 level ** significant at 0.01 level

The predictors explain 6.7% of total variance in EVS, 9.5% in Math and 8.3% in Language.

Teacher Related Variables

Teaching aids and teaching style of teachers, teacher qualification and teacher's experience influence the learning achievement of children in EVS and Mathematics. The positive association of these variables with the criteria indicates that use of teaching aids like teacher's guides, dictionary, reference books, maps, globes, charts, science and mathematics kit and teacher's experience have helped the children in improving their learning skills in EVS and Mathematics.

Table 28 Regression and Correlation Coefficients of Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	60.849	-----	55.537	-----	61.089	-----
Index-Qualification	1.206*	0.039*	1.299*	0.042*	0.821	0.024
Index-Experience	2.726	0.045	2.490	0.056	1.338	0.061
Index-Teaching Aid	2.693	0.043	3.050	0.027	2.770	0.062
Index-School Org.	0.256	0.026	0.493	0.070	0.147	0.013
R²	0.017		0.008		0.011	

*significant at 0.05 level

* significant at 0.01 level

Pupil Related Variables

The analysis of pupil related variables on the three criterions EVS, Mathematics and language indicates that the positive association of teaching-learning processes, which comprises the factors like teacher coming to class regularly, gives dictation and solves arithmetic problems, gives and checks homework, children receive help in solving difficult problems, frequent class tests help the children in improving their learning achievement in the three subjects. The educational status and occupation of parents help the children in learning EVS and Language. The positive association with school practices, academic assistance provided by the family members and percentage attendance of students in the school indicates that these variables help the children in improving their achievement in all the three subjects.

Table 29 Regression and Correlation Coefficients of Predictors of Pupil related Variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	29.385	----	33.801	----	52.278	----
Index-Ed & Occu	0.861*	0.042*	0.123	0.020	0.329	0.008
Index-Schooling	2.144**	0.100**	2.831**	0.107**	1.528**	0.072**
Index-TLP	0.249**	0.018*	0.851**	0.198	0.328**	0.189**
Age	-0.985**	-0.062**	-0.488**	-0.046*	-0.058	-0.021
Detention	-0.390**	-0.067**	-0.739*	-0.048*	-0.051*	0.067**
Attendance	0.206**	0.186**	0.162**	0.137**	0.079**	0.078**
R²	0.096		0.078		0.54	

*significant at 0.05 level

* significant at 0.01 level

The predictors explain 9.6% of total variance in EVS, 7.8% in Mathematics and 5.4% in Language.

One can infer from the above analysis that active involvement of teachers in schools, parents at home and use of teaching aids by teachers in schools have helped the children in improving their learning skills in all the subjects. School facilities help the children in improving their learning achievement in different subjects.

HARD SPOT OF LEARNING

In EVS, only one item i.e., 21 was found very difficult and items 18 and 22 were found difficult. Contentwise, the hard spot in learning of EVS was found in knowledge of solar system, planets, understanding of eclipse and knowledge of pre-British rule.

In Language, item No. 18 was found very difficult and 32, 26, 38 and 39 were found difficult as these items were correctly responded to by less than 25% and less than 50% of students respectively. Contentwise, the hard spots in learning of language was found in reading comprehension, of informatinal passage and comprehension of story.

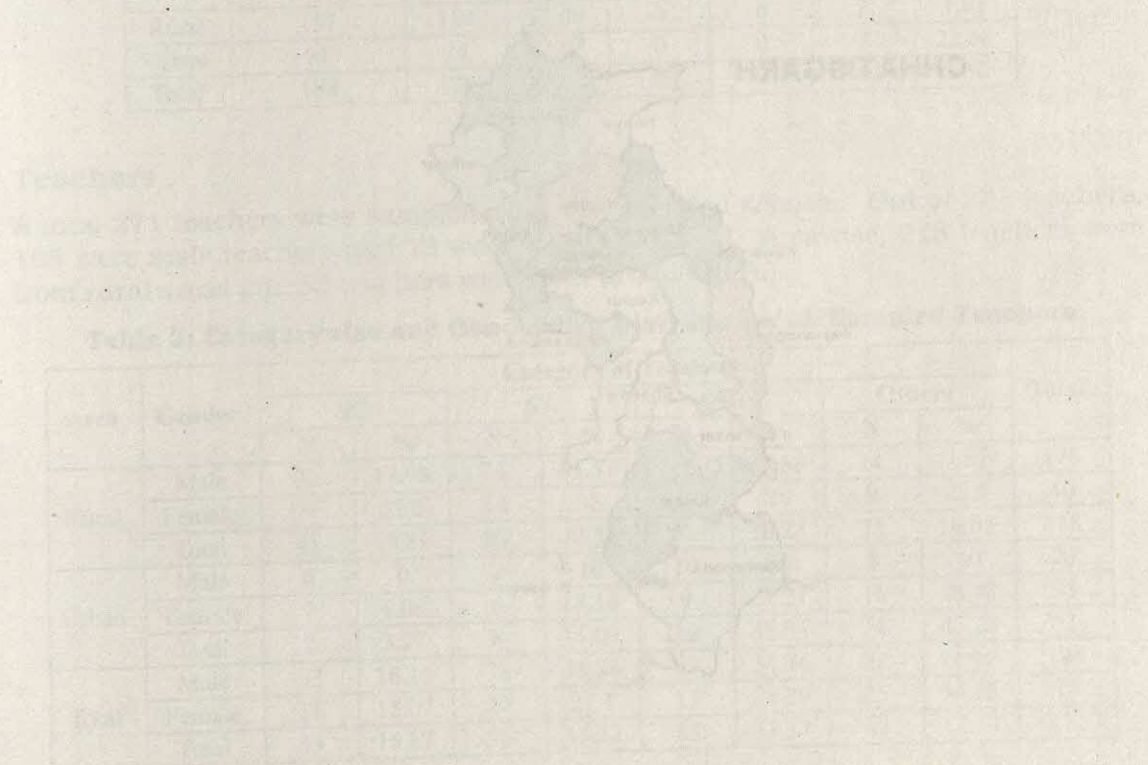
In Mathematics, no item was identified as very difficult. However, 8 (12.5%) items were found difficult. The hard spots in mathematics was identified as ascending and descending order, fraction, measurement of area, rounding of numbers and subtraction.

FINDINGS

- Percentage of male teachers was more than female teachers.
- Majority of the sampled schools were elementary schools having primary section.
- Children's books were available in 88% schools
- Magazine, journal and newspaper were available in only 15% schools.
- Blackboards were available almost in all schools.
- Mats and furniture for students were available in only 10% schools.
- Computer and TV were not available in a single school.
- Safe drinking water facility was available in 87% schools.
- Competency based teaching materials were more available in the year 2001 as compared to year 1998.
- Free uniforms were provided to scheduled caste girl students only
- Schedules tribe students were getting benefit of Mid-day meal only.
- Average school working days were 212 in the sampled districts and 7 periods of 42 minutes in a day.
- VEC was there in almost all schools.
- Parent - Teacher Association (PTA) was almost same in term of percentage in both rural and urban schools.
- The number of female teachers were more than male teachers in urban areas.
- Average number of teachers per school was more in urban schools than rural schools.
- Teacher-pupil ratio was higher in rural schools than urban schools.
- None of the teacher had qualification below Class X.
- Female graduate teachers were more in term of percentage than male teachers.
- More than 60% teachers were either graduate or post graduates.
- Male teacher were more qualified than female teachers in all the school subjects except in Language wherein percentage of female degree holders was more.
- None of the female teacher had M.Ed. degree.
- Teaching aids were available to more teachers teaching in urban schools than teachers in rural schools.
- These were more available to male teachers than female teachers in rural areas.
- Not a single in-service training programme was organised by SCERT
- Maximum in-service training programmes were organised by BRC.
- Maximum programmes were conducted in 'Competency based Teaching Learning' and minimum on 'Use of Instructional Material'
- Training programmes organised by various agencies were rated as 'average' by more than 54% teachers in terms of 'Utility of Knowledge' gained.
- Impact of training in improving teaching skills in different subjects, was also rated as 'Average' by more than 58% teachers.
- Head of the school provided academic 'always' assistance to more than 50% teachers.
- For 67% students, the medium of instructions in the school was same as the language spoken at home.
- Only 9% fathers and 1% mother were educated upto degree or higher education.
- Majority of mothers were housewives and fathers were farmers.
- Overall, girls received more academic assistance than boys.

- Overall, girls were more regular in attending schools than boys.
- In Mathematics and EVS 11-12% of the students scored between 90 to 100%.
- The performance of urban students was significantly better than rural in all three subjects.
- The performance of ST category students was significantly better than others and SC category students.
- Infrastructure facilities available in the school helped the children in improving their learning achievement in the three subjects.
- Use of teaching aids by teachers in the school helped the children in improving their learning achievement in EVS and Mathematics.
- Active involvement of teachers in school helped the children in improving their learning skills in the three subjects.

The State Education Department has been implementing various educational schemes and projects for the benefit of the students. The Department has been working towards the improvement of the quality of education in the state. The Department has been implementing various schemes and projects for the benefit of the students. The Department has been working towards the improvement of the quality of education in the state.



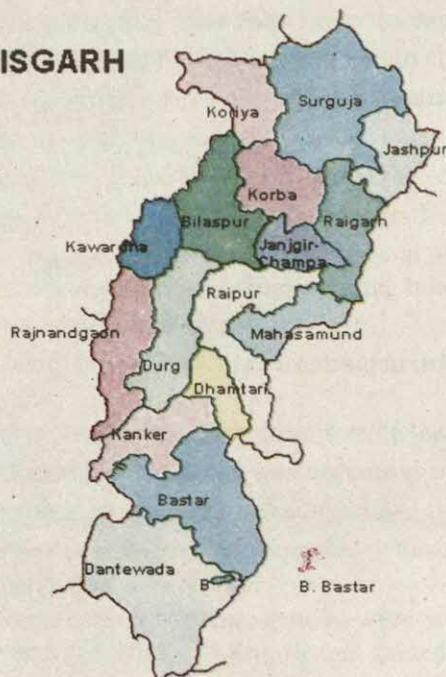
The Bihar Education Department has been implementing various educational schemes and projects for the benefit of the students. The Department has been working towards the improvement of the quality of education in the state. The Department has been implementing various schemes and projects for the benefit of the students. The Department has been working towards the improvement of the quality of education in the state.

INTRODUCTION

The State of Chhattisgarh carved out of M.P. has 16 revenue districts and 19 educational districts. Director Public Instructions is the head of the Educational Institutions of the state. Each educational district has a District Education Officer and each block has a Block Education Officer.

A number of Educational Institutions have been opened to increase enrolment and impart quality education. In the year 2002-2003 there were 25,421 of primary schools.

CHHATISGARH



Enrolment drives like 'Padhbo Padhabo School Jabo' and 'School Jabo Padhke Aabo' have helped create awareness among community in the state. The base population increases at the projected rate of 1.86% per year. Annual increase is of 77,322 children and by 2006 the actual increase will be in the range of 3,86,614 bringing out total targeted population to 45,33,755. The boys enrolment from Class I to VIII is 20,31,172 and the girls enrolment is 18,08,291. Gross enrolment ratio is 89 girls per 100 boys.

The PTR in the state is 44:1. Number of primary teachers in the state is 57,177. In the year 2002-03, 97% habitated areas in the state were provided primary schools within the area of 1 km.

SAMPLE

The information collected from sampled schools, teachers and students through various research tools developed for the achievement survey is presented as under:

Schools

A total 188 schools were sampled from Bastar, Rajnandgaon, Raipur and Sarguja districts of Chhatisgarh. Out of total sampled schools 41 schools were from Bastar, 50 from Rajnandgaon, 49 from Raipur and remaining 48 from Sarguja.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided Schools		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	157	154	98.09	0	0	3	1.91
Urban	31	24	77.42	0	0	7	22.58
Total	188	178	94.68	0	0	8	5.32

Teachers

A total 271 teachers were sampled from 188 sampled schools. Out of 271 teachers, 198 were male teachers and 73 were female teachers. Areawise, 218 teachers were from rural areas and 53 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Categorywise and Genderwise Distribution of Teachers										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	32	17.98	74	41.57	58	32.58	14	7.87	178
	Female	9	22.5	14	35	8	20	9	22.5	40
	Total	41	18.81	88	40.37	66	30.28	23	10.55	218
Urban	Male	0	0	2	10	10	50	8	40	20
	Female	2	6.06	6	18.18	9	27.27	16	48.48	33
	Total	2	3.77	8	15.09	19	35.85	24	45.28	53
Total	Male	32	16.16	76	38.38	68	34.34	22	11.11	198
	Female	11	15.07	20	27.4	17	23.29	25	34.25	73
	Total	43	15.87	96	35.42	85	31.37	47	17.34	271

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except Others.

Students

A total number of 2,597 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Bastar	Rural	168	118	286
	Urban	48	43	91
	Total	216	161	377
Rajnandgaon	Rural	282	244	526
	Urban	104	130	234
	Total	386	374	760
Raipur	Rural	570	297	867
	Urban	33	146	179
	Total	603	443	1046
Sarguja	Rural	149	120	269
	Urban	80	65	145
	Total	229	185	414
Total	Rural	1169	779	1948
	Urban	265	384	649
	Total	1434	1163	2597

Out of 2,597 students, 1,948 students were from rural areas and remaining 649 students were from urban areas. Out of the total sample, 1,434 were boys and 1,163 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of Terminal Stage of School and Pre-school

Area	Pre primary classes Attached		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	33	21.02	155	98.73	2	1.27	0	0
Urban	10	32.26	29	93.55	2	6.45	0	0
Total	43	22.87	184	97.87	4	2.13	0	0

Table 4 indicates that out of 157 rural sampled schools, pre-primary classes were attached with only 33 schools whereas in urban areas, out of 31 sampled schools, the same was attached with 10 schools. Further, approximately 99% schools in rural areas and 94% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 1% and 6% respectively for rural and urban areas. However, no school having secondary classes was included in the sample.

Facilities related to teaching-learning process

It was observed that maps, charts and children's books were available in more than 78% schools. Magazines, journals and newspapers were available only in 15% schools. Reference books, dictionaries, encyclopedias, maths kits and game equipments were available in 45% to 49% schools. Besides, mini tool kit and primary science kit were available in 36% to 38% schools.

Infrastructural facilities

It was observed that school bell, blackboard and chairs for teachers were available in 94% and more schools, whereas, tables for teachers, water pitcher, ladel and glasses, chalk and duster were available in 88% to 90% schools. Besides, play ground for students were available in 50% schools. However, musical instruments were available in only 11% schools. Further, dustbin and pin-up board/notice board were available in 35% and 42% schools.

Ancillary Facilities

Computer, TV and separate toilet for girls facilities were available only 3 to 6% schools. Annual medical check-up for children, and immunisation facilities were available in 90% and 91% schools respectively. Besides, toilet facilities and electric connection were available in only 13% schools. However, safe drinking water facility was available in 73% schools.

Competency-based Teaching Materials

Information gathered shows that out of 188 schools, competency based textbooks were available in 84 to 91 schools for Classes I to V in the year 2001, and in 1 to 7 schools for Classes I to V in the year 1998.

Workbooks were available in 28 to 32 schools in the year 2001 as compared with 2 to 6 schools in the year 1998 for Classes I to V. The Teachers' Handbooks were available in 22 to 26 schools in the year 2001 and in 5 to 7 schools in the year 1998 for primary classes. Besides, teaching aids were available in 40 to 45 schools in 2001, in 5 to 11 schools in 1998 for Classes I to V.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children Receiving Facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	1718	1893	3076	2810	5429	5312	562	1134	10785	11149
	%	15.93	16.98	28.52	25.20	50.34	47.65	5.21	10.17	100	100
Free uniform	N	794	1170	933	884	826	1488	41	92	2594	3634
	%	30.61	32.20	35.97	24.33	31.84	40.95	1.58	2.52	100	100
Free textbooks	N	1354	1378	2342	2350	3546	3617	252	698	7494	8043
	%	18.07	17.13	31.25	29.22	47.32	44.97	3.36	8.68	100	100
Scholarship for regular attendance	N	1032	853	1104	1286	786	787	1	2	2923	2928
	%	35.31	29.13	37.77	43.92	26.89	26.88	0.03	0.07	100	100
Other Schemes	N	781	819	779	943	839	782	1	114	2400	2658
	%	32.54	30.81	32.46	35.48	34.96	29.42	0.04	4.29	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarships for regular attendance etc., were available to both boys and girls across the categories. In case of mid-day meal and free textbooks both boys and girls from OBC category get maximum benefit. Likewise, boys and girls from ST category get maximum benefit from scholarship for regular attendance. But, free uniform scheme were more accessible to girls from OBC category and boys from ST category.

Instructional Time

Average number of working days in schools was approximately 223 days. On an Averagely schools were having 6 periods in a day of approximately of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 157 rural schools, 154(98%) schools were having Village Education Committees (VEC). Parent-Teacher Association, Area Education Committees and School-Management Committees were found more in urban schools than rural schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	154	19	173
	%	98.09	61.29	92.02
AEC	N	53	17	70
	%	33.76	54.84	37.23
SMC	N	71	18	89
	%	45.22	58.06	47.34
PTA	N	109	23	132
	%	69.43	74.19	70.21

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	157	276	74.59	94	25.41	370	2.36	46
Urban	31	34	26.15	96	73.85	130	4.19	50
Total	188	310	62	190	38	500	2.66	47

Table 7 shows that overall number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 2 and 4 respectively. Further, average pupil teacher ratio was 47:1, however, this ratio was 50:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. However, no female teacher was Class X certificate holder. Besides, only 1 to 2% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	2	1.01	8	4.04	80	40.4	63	31.82	45	22.73	198
Female	2	2.74	0	0	37	50.68	16	21.92	18	24.66	73
Total	4	1.48	8	2.95	117	43.17	79	29.15	63	23.25	271

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e. Mathematics, Science, Language and Social Sciences.

Table 9: The level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	41	20.71	81	40.91	71	35.86	5	2.53	198
	Female	15	20.55	38	52.05	19	26.03	1	1.37	73
	Total	56	20.66	119	43.91	90	33.21	6	2.21	271
Science	Male	40	20.2	66	33.33	89	44.95	3	1.52	198
	Female	10	13.7	28	38.36	32	43.84	3	4.11	73
	Total	50	18.45	94	34.69	121	44.65	6	2.21	271
Langu- age	Male	4	2.02	17	8.59	108	54.55	69	34.85	198
	Female	2	2.74	3	4.11	45	61.64	23	31.51	73
	Total	6	2.21	20	7.38	153	56.46	92	33.95	271
Social Science	Male	27	13.64	54	27.27	75	37.88	42	21.21	198
	Female	10	13.7	27	36.99	27	36.99	9	12.33	73
	Total	37	13.65	81	29.89	102	37.64	51	18.82	271

The data reveals that in Mathematics, Language and Social Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. However, this was reverse in case of Science. Similarly, the percentage of male teachers who studied Mathematics, Science and Social Science upto higher secondary level was more than female teachers. This was reverse in case of secondary level. Besides, the percentage of male teachers who studied Mathematics and Science below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few male teachers were having M.Ed. degree. However, not a single female teacher was M.Ed.. Besides, approximately, 1/3rd female teachers had B.Ed.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
188	Male	101	30	2
	Female	32	10	0
	Total	133	40	2

Availability of Teaching Aids

Various type of teaching aids available to teachers in both rural and urban. All teaching aids were available to more than 90% teachers in urban schools except others and to more than 83% teachers in rural schools.

In-service Training

The account of training programmes organised by various agencies for teachers' during last three years (1999-2002) is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of teachers trained
1. School Complex	N	21
	%	7.75
2. Block Resource Centre	N	109
	%	40.22
3. Teacher Resource Centre	N	11
	%	4.06
4. Cluster Resource Centre	N	16
	%	5.90
5. DIET	N	63
	%	23.25
6. SCERT	N	6
	%	2.21
7. Others	N	12
	%	4.43
Total No. of Sampled teachers	N	271
	%	100

Data portrays that out of 271 sampled teachers, maximum 109(40.22%) teachers attended the training programme conducted by Block Resource Centre. However, only 6(2.21%) teachers attended the training programmes organised by SCERT.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	44
2. Content Enrichment	60
3. Production of Instructional Material	4
4. Use of Instructional Material	3
5. Assessment of Pupil Learning	17
6. Competency based Teaching Learning	73
7. Activity based Joyful Learning	16
8. Others	42

Out of total 271 teachers 77(28%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was almost same. The same was also true for both urban and rural areas teachers. However, percentage of female teachers in rural schools and male teacher in urban schools was more than their counterparts in the respective areas.

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Competency-based Teaching-Learning' and it was followed by 'Content Enrichment'. Minimum programmes were conducted on 'Use of Instructional Material'.

The Effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	53	44	50	51
	%	27.32	22.68	25.77	26.29
Average	N	133	138	138	134
	%	68.56	71.13	71.13	69.07
Low	N	8	12	6	9
	%	04.12	6.18	3.09	4.64

It is evident that approximately 69% training programmes were averagely effective in terms of utility of knowledge gained during training programmes. Only 26% programmes were considered as 'highly' useful. The impact of these training programmes was rated as average by 69% to 71% teachers in different subjects. However, improvement in teaching of skills in all subjects due to these training programmes was rated 'High' by 23% to 27% teachers.

Academic Assistance Received from Various Sources

The teachers both in rural and urban areas were getting maximum assistance from

'Head of the School' and it was followed by 'Other teachers of the School' and from other sources.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instructions for approximately 78% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents is presented in Table 14.

Table 14 indicates that approximately 23% fathers and 43% mothers of the students were illiterate. Only 3% of fathers and 7% of mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	68	2.62	114	4.39
1. Illiterate	600	23.10	1106	42.59
2. Literate	334	12.86	490	18.89
3. Primary	654	25.18	460	17.71
4. Secondary	551	21.22	276	10.63
5. Sr. Secondary	208	8.01	41	1.58
6. Degree and above	79	3.04	17	0.65
7. Donot Know/Cannot say	103	3.99	93	3.58

Occupation of Parents

This information is presented in Table 15. In rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mothers were Manager/Senior Officers. Number of mothers and fathers as Manager/Senior Officers was more in rural areas than urban areas. Fathers' occupation in decreasing order was farmer, skilled worker, agricultural labour, shopkeeper, manual unskilled worker, others, manager/senior officer, street vendor and household etc. Mothers occupation in decreasing order was household/housewives, farmer, agricultural labour, skilled worker, manual unskilled worker and domestic servant, others etc. However, not a single mother was employer in urban areas.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	58	47	105	25	15	40
Household/ Housewife	42	1	43	1265	519	1784
Farmer	1015	52	1067	364	11	375
Poultry farming	7	2	9	0	0	0
Agricultural labour	289	31	320	156	12	168
Picking forest produce	3	3	6	15	1	16
Domestic Servant	9	16	25	8	24	32
Street Vender	38	24	62	9	1	10
Manual unskilled worker	73	84	157	14	24	38
Skilled worker	169	171	340	26	22	48
Clerical worker	10	27	37	4	6	10
Shopkeeper	67	103	170	5	8	13
Employer	17	12	29	4	0	4
Manager/Senior Officer	77	29	106	11	2	13
Others	74	47	121	42	4	46

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Girls and boys both in rural and urban as well as overall were getting more help from father/guardian than any other. However, in rural areas girls were getting more academic assistance from father, than boys but the trend was reverse in urban areas. The descending order of academic assistance provided by the family members was father, elder brother and sister and mother.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	380	264	125	143	505	407
	%	32.51	33.89	47.17	37.24	35.22	35
Mother	N	169	126	93	113	262	239
	%	14.46	16.17	35.09	29.43	18.27	20.55
Elder Brother/Sister	N	272	182	121	139	393	321
	%	23.27	23.36	45.66	36.2	27.41	27.6
Others	N	150	116	50	91	200	207
	%	12.83	14.89	18.87	23.7	13.95	17.8

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was almost same. Only 2-3% percent boys and girls were attending schools less than 60% of total working days. Approximately, 92% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the conduct of achievement survey in the year 2002. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different score intervals ranging from 0 to 100 and item parameters has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1169	41.53	17.68	265	46.69	20.17	5.16	1434	42.48	18.27	3.84
	Girls	779	44.08	17.95	384	43.76	17.78	-0.32	1163	43.97	17.89	-0.29
	Diff.		-2.55			2.93				-1.49		
	Total	1948	42.55	17.83	649	44.96	18.83	2.41	2597	43.15	18.11	2.86
	CR Value		-3.09			1.91				-2.09		
Mathematics	Boys	1169	37.99	17.51	265	39.69	19.03	1.7	1434	38.31	17.81	1.33
	Girls	779	39.49	17.44	384	36.26	14.4	-3.23	1163	38.42	16.56	-3.35
	Diff.		-1.5			3.43				-0.11		
	Total	1948	38.59	17.5	649	37.66	16.52	-0.93	2597	38.36	17.26	-1.22
	CR Value		-1.86			2.48				-0.16		
Language	Boys	1169	48.87	15.75	265	52.84	16.23	3.97	1434	49.6	15.91	3.61
	Girls	779	49.76	15.64	384	49.88	17.6	0.12	1163	49.8	16.31	0.11
	Diff.		-0.89			2.96				-0.2		
	Total	1948	49.22	15.71	649	51.09	17.11	1.87	2597	49.69	16.08	2.46
	CR Value		-1.23			2.21				-0.31		

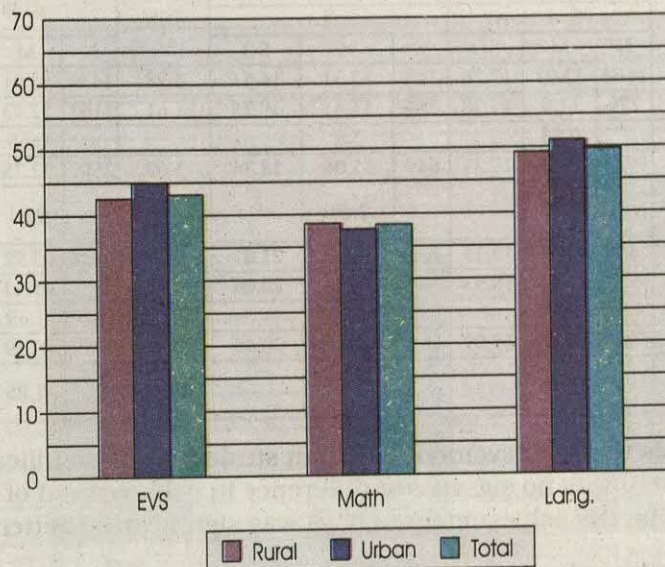
Environmental Studies

The data reveals that achievement of urban students was significantly better than rural students. The performance of rural girls was better than urban girls though the difference in achievement was not significant. In rural areas, performance of girls was significantly better than boys. The overall performance of girls was better than boys and the difference was significant.

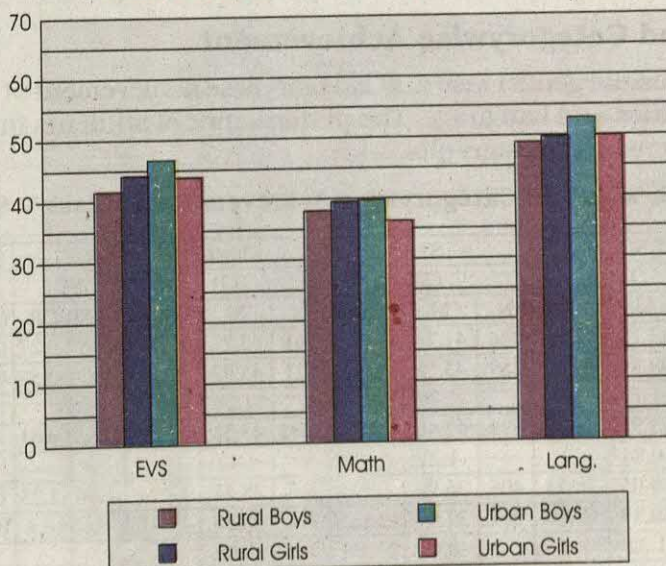
Mathematics

The data shows that performance of rural girls was significantly better than urban girls. In urban areas, the achievement of boys was significantly better than girls.

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Language

The achievement of urban students was found to be significantly better than rural students. There was no significant difference in achievement between rural and urban girls. In urban areas, performance of boys was significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram - mar & Usage	Boys	1169	52.03	17.26	265	57.31	16.53	5.28	1434	53.01	17.25	4.66
	Girls	779	51.9	17.38	384	53.51	19.35	1.61	1163	52.43	18.06	1.38
	Diff.		0.13			3.8				0.58		
	Total	1948	51.98	17.31	649	55.06	18.34	3.08	2597	52.75	17.62	3.76
	CR Value		0.16			2.68				0.83		
Comp - Rehen - sion	Boys	1169	43.59	19.13	265	45.38	21.01	1.79	1434	43.92	19.5	1.27
	Girls	779	46.18	18.93	384	43.84	20.06	-2.34	1163	45.41	19.33	-1.91
	Diff.		-2.59			1.54				-1.49		
	Total	1948	44.63	19.09	649	44.47	20.45	-0.16	2597	44.59	19.43	-0.18
	CR Value		-2.95			0.93				-1.95		

The data reveals that achievement of urban students was significantly better than rural students. There was no significant difference in achievement of rural and urban girls. In urban areas, the achievement of boys was significantly better than girls.

Reading Comprehension

In reading comprehension, there was no significant difference in achievement of rural and urban students. In rural areas, the achievement of girls was significantly better than boys.

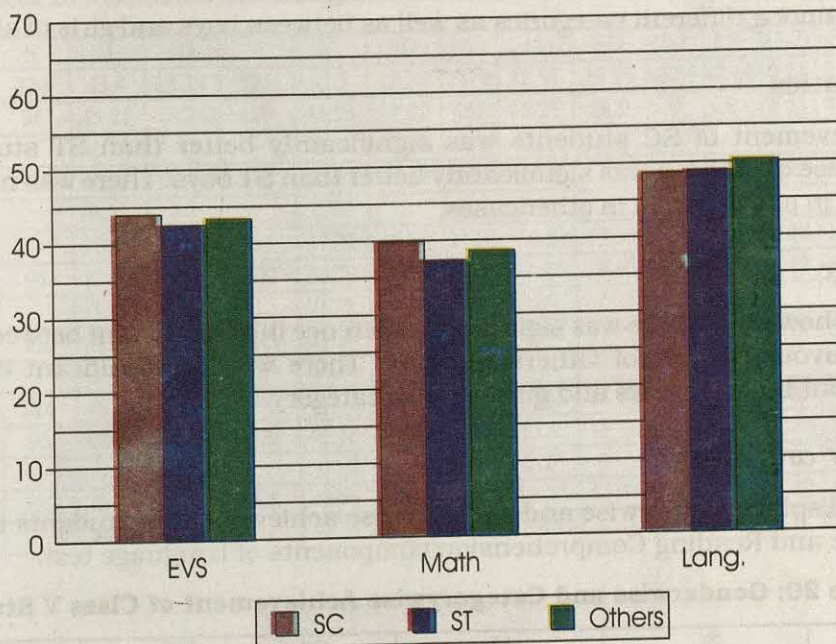
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

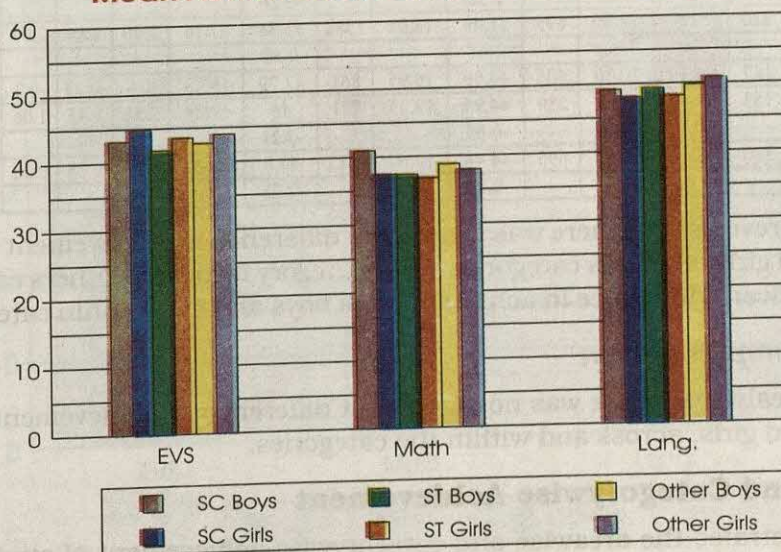
Table 19: Genderwise and Categorywise Achievement of Class V Students in EVS

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	167	43.13	18.39	406	41.74	19.77	861	42.71	17.5	-0.42	-0.27	0.97	0.84	-1.39	-0.8
	Girls	153	44.84	17.93	289	43.53	18.75	721	43.97	17.54	-0.87	-0.55	0.44	0.34	-1.31	-0.72
	Diff.		-1.71			-1.79			-1.26							
	Total	320	43.95	18.16	695	42.48	19.36	1582	43.28	17.52	-0.67	-0.61	0.8	0.93	-1.47	-1.17
	CR		-0.84			-1.21			1.42							
Mathematics	Boys	167	40.05	18.93	406	36.96	16.98	861	38.52	17.94	-1.98	-1.25	1.56	1.5	-3.54	-2.09
	Girls	153	39.18	17.06	289	37.64	16.7	721	38.58	16.41	-0.6	-0.4	0.94	0.81	-1.54	-0.91
	Diff.		1.32			-0.68			-0.06							
	Total	320	39.87	18.04	695	37.24	16.85	15.82	38.54	17.25	-1.33	-1.21	1.3	1.68	-2.63	-2.20
	CR		0.66			-0.53			1.74							
Language	Boys	167	49.16	16.34	406	49.32	16.34	861	49.82	15.63	0.66	0.48	0.5	0.52	0.16	0.11
	Girls	153	48.06	17.66	289	48.18	16.48	721	50.81	15.88	2.75	1.78	2.63	2.32	0.12	0.07
	Diff.		1.1			1.14			-0.99							
	Total	320	48.63	16.97	695	48.85	16.4	1582	50.27	15.74	1.64	1.6	1.42	1.93	0.22	0.19
	CR		0.58			0.90			1.24							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that in EVS, there was no significant difference in achievement of students among different categories as well as between boys and girls of all categories.

Mathematics

The achievement of SC students was significantly better than ST students. Also performance of SC boys was significantly better than ST boys. There was no significant difference in achievement in other cases.

Language

The data shows that there was significant difference in achievement between Others vs ST girls favouring girls of Others category. There was no significant difference in achievement between boys and girls in each category.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram - mar & Usage	Boys	167	52.14	17.37	406	52.45	17.81	861	53.44	16.96	1.3	0.89	0.99	0.94	0.31	0.19
	Girls	153	50.8	19.28	289	50.13	18.23	721	53.7	17.63	2.9	1.71	3.57	2.84	-0.67	-0.35
	Diff.		1.34			2.32			-0.26							
	Total	320	51.5	18.29	695	51.49	18.01	1582	53.56	17.26	2.06	1.85	2.07	2.56	-0.01	-0.01
	CR		0.65			1.67			0.30							
Read - ing Comp - rehen - sion	Boys	167	44.19	20.36	406	44.09	19.95	861	43.79	19.13	-0.4	-0.23	-0.3	-0.25	-0.1	-0.05
	Girls	153	43.49	19.5	289	44.94	19.35	721	46	19.28	2.51	1.45	1.06	0.79	1.45	0.75
	Diff.		0.7			-0.85			-2.21							
	Total	320	43.85	19.93	695	44.44	19.69	1582	44.8	19.22	0.95	0.78	0.36	0.4	0.59	0.44
	CR		0.31			-0.56			-2.28							

The data reveals that there was significant difference in achievement between total students and girls of Others category and ST category favouring Others category. There was no significant difference in achievement of boys and girls within categories.

Reading Comprehension

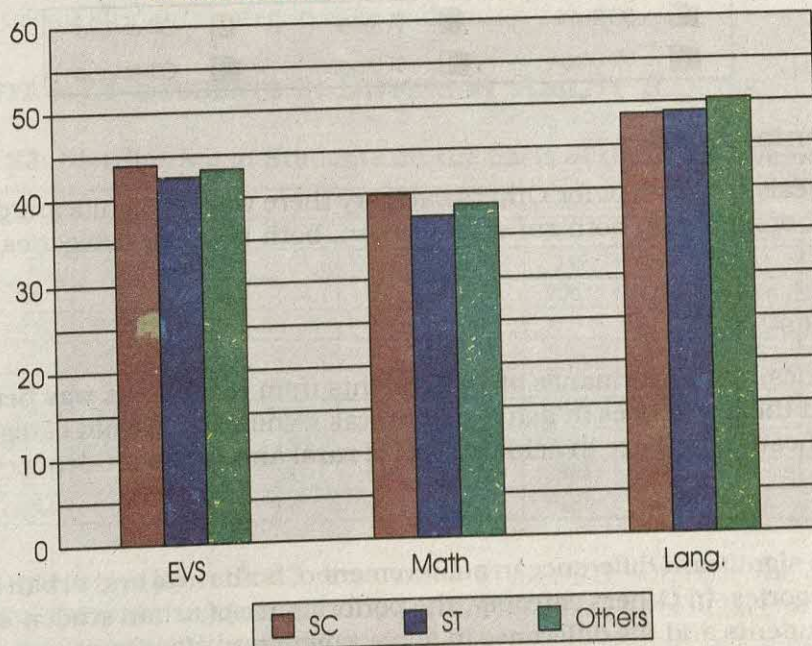
The data reveals that there was no significant difference in achievement of students, both boys and girls, across and within the categories.

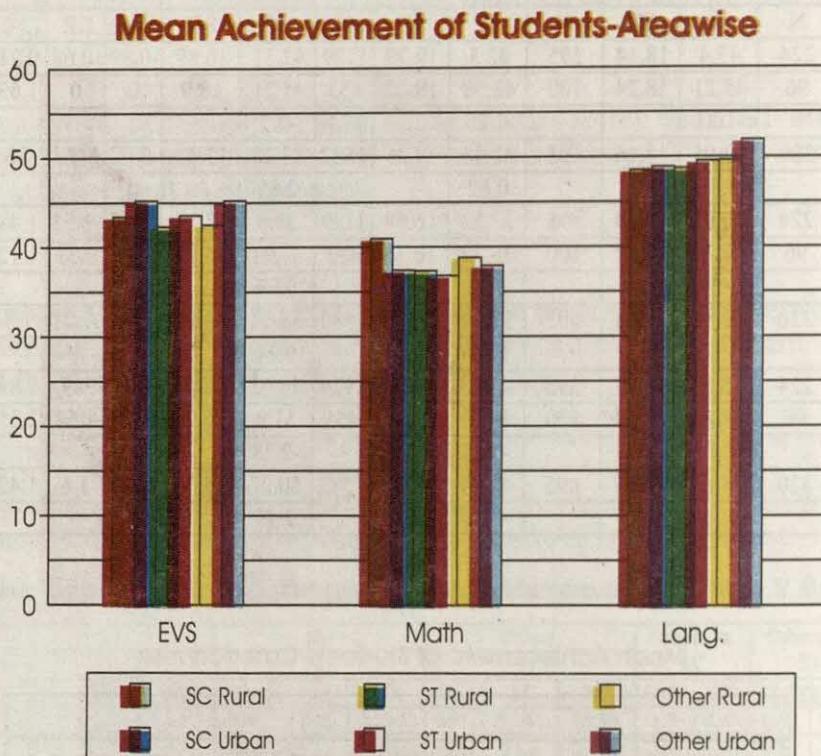
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		ST vs SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	224	43.4	18.14	595	42.3	19.39	1129	42.51	16.89	-0.89	-0.68	0.21	0.22	-1.1	-0.76
	Urban	96	45.21	18.24	100	43.58	19.22	453	45.21	18.9	0	0	1.63	0.77	-1.63	-0.61
	Diff.		-1.81			-1.28			-2.7							
	Total	320	43.95	18.16	695	42.48	19.36	1582	43.28	17.52	-0.67	-0.61	0.8	0.93	-1.47	-1.17
	CR		0.82			0.62			2.65							
Mathe- matics	Rural	224	40.93	19.34	595	37.32	16.89	1129	38.8	17.39	-2.13	-1.53	1.48	1.71	-3.61	-2.46
	Urban	96	37.39	14.37	100	36.79	16.75	453	37.91	16.92	0.52	0.31	1.12	0.6	-0.6	-0.27
	Diff.		3.54			0.53			0.89							
	Total	320	39.87	18.04	695	37.24	16.85	1582	38.54	17.25	-1.33	-1.21	1.3	1.68	-2.63	-2.2
	CR		1.81			0.29			0.94							
Langu- age	Rural	224	48.53	16.75	595	48.73	16.28	1129	49.62	15.18	1.09	0.9	0.89	1.1	0.2	0.15
	Urban	96	48.88	17.54	100	49.55	17.12	453	51.9	16.98	3.02	1.54	2.35	1.24	0.67	0.27
	Diff.		-0.35			-0.82			-2.28							
	Total	320	48.63	16.97	695	48.85	16.4	1582	50.27	15.74	1.64	1.6	1.42	1.93	0.22	0.19
	CR		-0.17			-0.45			2.49							

Mean Achievement of Students-Categorywise



Environmental Studies

The data reveals that except for Others category there was no significant difference in achievement of students, both rural and urban, both between categories and within categories.

Mathematics

In Mathematics, the performance of SC students from rural areas was better than ST students and the differences in achievement was significant. Within categories, there was no significant difference in achievement of rural and urban students.

Language

There was no significant difference in achievement of both rural and urban students of different categories. In Others category, the performance of urban students was better than rural students and the difference in achievement was significant.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
Gram - mar & Usage	Rural	224	50.88	18	595	51.42	17.9	1129	52.5	16.83	1.62	1.24	1.08	1.22	0.54	0.38
	Urban	96	52.96	18.97	100	51.88	18.71	453	56.21	18.04	3.25	1.54	4.33	2.11	-1.08	-0.4
	Diff.		-2.08			-0.46			-3.71							
	Total	320	51.5	18.29	695	51.49	18.01	1582	53.56	17.26	2.06	1.85	2.07	2.56	-0.01	-0.01
	CR		-0.91			-0.23			-3.77							
Read - ing Com - pre - hensin	Rural	224	44.61	19.84	595	44.24	19.8	1129	44.84	18.56	0.23	0.16	0.6	0.61	-0.37	-0.24
	Urban	96	42.08	20.11	100	45.67	19.08	453	44.71	20.81	2.63	1.16	-0.96	-0.45	3.59	1.28
	Diff.		2.53			-1.43			0.13							
	Total	320	43.85	19.93	695	44.44	19.69	1582	44.8	19.22	0.95	0.78	0.36	0.4	0.59	0.44
	CR		1.04			-0.69			0.12							

In Grammar and Usage, the achievement of urban students of Others category was significantly better than students of ST category. Within categories, the performance of urban students of Others category was better than rural students.

Reading Comprehension

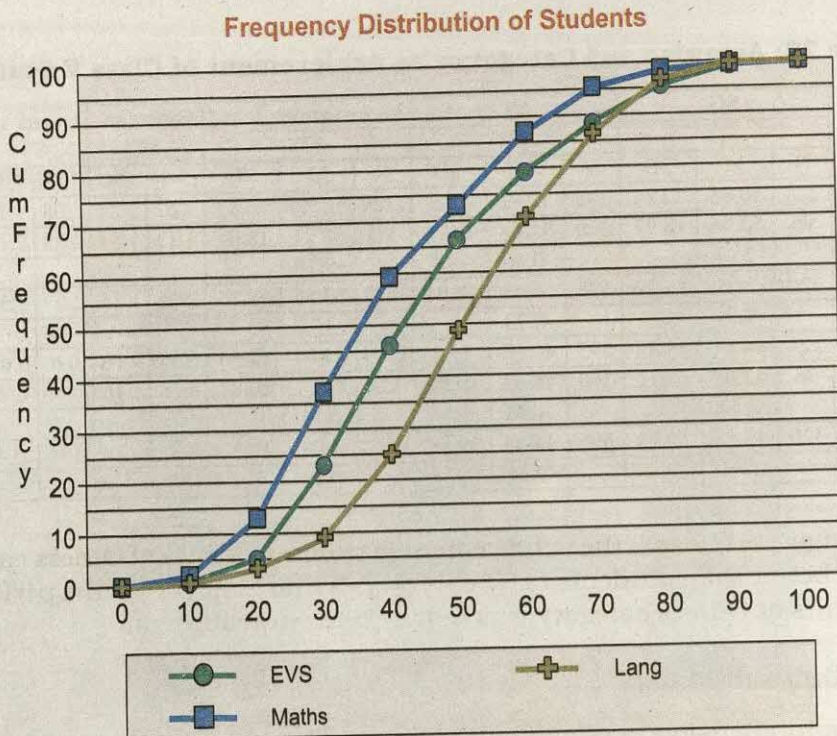
In reading comprehension, no significant difference in achievement was found between rural and urban students categorywise and within categories.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	22	115	467	598	526	335	241	182	97	14
	cf	22	137	604	1202	1728	2063	2304	2486	2583	2597
	cf(%)	0.85	5.28	23.26	46.28	66.54	79.44	88.72	95.73	99.40	100
Math	f	52	284	631	575	355	364	219	83	23	11
	cf	52	336	967	1542	1897	2261	2480	2563	2586	2597
	cf(%)	2.00	12.94	37.24	59.38	73.05	87.06	95.49	98.69	99.58	100
Language	f	14	71	150	413	618	567	413	270	78	3
	cf	14	85	235	648	1266	1833	2246	2516	2594	2597
	cf(%)	0.54	3.27	9.05	24.95	48.75	70.58	86.48	96.88	99.88	100

The figures posted in Table 23 reveals that in all three subjects, the distribution of scores covered the entire range from 0-100 percent. In all the three subjects, the maximum number of cases were in the middle range. The least number of cases in EVS (14), Mathematics (11) and in Language (31) were all in the range 90-100 percent. The maximum number of cases in EVS (598), in Mathematics (631) and in Language (618) were in the range 30-40 percent, 20-30 percent and 40-50 percent respectively. The number of students above 50% in EVS, Language and Math was 43.46%, 41.2% and 52.25% respectively whereas 4.27%, 3.22% and 1.31% respectively scored above 80% marks.



CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	3	3	8
25 to less than 50	Difficult	28	12	22
50 to less than 75	Average	8	15	8
75 to 100	Very Easy	1	4	0

Language test was easier than EVS and Mathematics. About three-fourth items in Mathematics appears to be difficult to children. These items are mostly on fractions or conversions of units.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	34	33	28
Less than .30	Poor Discrimination	6	7	10

No items is behaving as good discriminator. The poorly discriminating items are relatively more in Mathematics.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of tests

S. No.	Name of the test	No. of items	Reliability	
			Spelit half	K.R. -20
1	EVS	40	0.78	0.85
2	Mathematics	38	0.67	0.83
3	Language	40	0.66	0.80

Most of the items were discriminating adequately. The reliability co-efficient for EVS, Language and Mathematics were 0.78, 0.66 and 0.67 respectively.

IMPACT OF INTERVENING VARIABLES

School Related Variables

Community participation through various committees, availability and use of teaching aids and competency-based teaching learning material help the children in improving their skills to some extent in the three subjects EVS, Mathematics and Language.

Table 27: Regression and Correlation Co-efficients of Predictors of School Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	13.200	--	11.082	--	14.242	--
PTR	-0.057	-0.044	-0.035	-0.044	-0.102**	-0.068*
Com Participation	3.28**	0.214**	0.450	0.102	0.133	0.108
Teach-aid	0.837*	0.174**	0.897*	0.173*	0.376	0.130
Physical facility	0.670	0.129	0.117	0.096	0.431	0.106
Ancillary facility	0.022	0.033	0.010	0.009*	0.040	0.005
Instructional time	0.040	0.094	0.043*	0.115*	0.062**	0.170*
Working day	0.020	0.057	0.096	0.152*	0.038	0.179*
Index-Comp. TLM	0.140	0.084	0.043	0.062	-0.889	-0.090
R²	0.104		0.079		0.103	

*significant at 0.05 level

**significant at 0.01 level

The predictors explain 10.4% of total variance in EVS, 7.9% in Mathematics and 10.3% in Language.

Teacher Related Variables

Teacher's qualification, teacher's experience, teaching aids and school organisation influence the learning achievement of children. The active involvement of school organisation i.e., head of institution, cluster/block resource coordinator, BEO/DEO/AIOS and DIET faculty, use of teaching aids like teacher's guide, dictionary, reference books, maps, globes, science and mathematics kits and teacher's qualification help the children in improving the learning skills in the three subjects EVS, Mathematics and Language.

Table 28: Regression and Correlation Co-efficients of Predictors of Teacher related Variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	34.722	--	33.134	--	48.153	--
Index-Qualification	1.191*	0.170**	1.211*	0.173**	3.067*	0.141*
Index-Experience	1.581*	0.115*	0.380	0.073	0.233	0.027
Index-Teaching Aid	5.042*	0.235**	5.364**	0.024**	3.625*	0.165**
Index-School Org.	0.848**	0.251**	0.634*	0.222**	0.193	0.113**
R²	0.112		0.102		0.047	

*significant at 0.05 level

**significant at 0.01 level

The predictors explain 11.2% of total variance in EVS, 10.2% in Mathematics and 4.7% in Language.

Pupil Related Variables

The regression analysis of pupil related variables on the three criterions i.e., EVS, Mathematics and Language indicates that the teaching-learning process, comprising the variables like teacher regularity, giving dictation and arithmetic problems, checks homework, receiving help in solving difficult problems frequent class tests, and percentage attendance of children in schools help the children in improving the learning achievement in the three subjects. Age of children is negatively associated with the criterions which indicates children in higher age group score poorly and vice-versa. Parents education and occupation also help the children in improving their learning achievement.

Table 29 Regression and Correlation Co-efficients of Predictors of Pupil related Variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	59.035	--	46.11	--	63.958	--
Index-Ed & Occu	0.915	0.071**	1.630**	0.087**	1.987**	0.107**
Index-Schooling	0.034	0.033	0.241*	0.003*	0.648	0.020
Index-TLP	5.634**	0.245**	5.431**	0.280**	5.873**	0.190**
Age	-1.984**	-0.116**	-1.711**	-0.112**	-0.819**	-0.132*
Detention	-0.431*	-0.031*	-0.285	-0.020	-0.095	-0.005
Attendance	0.073**	0.076**	0.133**	0.129**	0.073**	0.082**
R²	0.079		0.106		0.062	

*significant at 0.05 level

**significant at 0.01 level

The predictors explain 7.9% of total variance in EVS 10.6% in Math, and 6.2% in Language.

One can infer from the above analysis that active involvement of teachers in school and parents at home has helped the children in improving their scores in EVS, Mathematics and Language. Active participation of community through various committees, availability of teaching aids, involvement of school organisation, teacher's qualification have helped the children in improving their learning skills in the three subjects.

HARD SPOT OF LEARNING

In EVS, items 4, 18 and 21 were correctly responded to by less than 25% of students, thus, found very difficult. But, 28(70%) of items were found difficult. The hard spots in EVS was found in identification of natural features of the country, climatic conditions at varying attitudes, identification of boundaries with neighbouring countries, identification of poles, knowledge of civics, knowledge of freedom movement and role of farmers, understanding of eclipse, knowledge of composition of air, knowledge of soil erosion, effects of deforestation, effect of weather conditions on human bodies, knowledge of health workers, understanding of deficiency diseases, knowledge of parts of human body, knowledge of carriers of diseases, knowledge of plants in deserts and conservation of wild animals.

In Language, items 30, 38 and 39 were correctly responded to by less than 25% and hence found very difficult. However 18(45%) were found difficult. Contentwise, the hard spots in learning in Language was structure, comprehension of instructions, comprehension of time table and comprehension of story.

In Mathematics, 8(20%) items were found very difficult and 22(58%) items were found difficult. Contentwise, the hard spots in mathematics was identified as ascending/descending order, using of ordering symbols $<$, $=$, $>$, division, subtraction, LCM, Average, profit loss, word problem on addition, time calculation, triangle according to angles, triangles according to sides, circle-radius diameter, word problem on percentage and multiplication, BODMAS, rounding of numbers, conversion from percentage to fraction, triangles according to sides, area of square and circle radius diameter concept.

FINDINGS

- Musical instruments were available approximately in 10 % schools.
- TV, computer and separate toilet for girls were available in very few schools.
- Pre-schools were attached only with primary and upper primary schools.
- More teaching Aids were available for primary classes in 2001 as compared to textbooks, workbooks and teachers' Handbooks
- Competency based textbooks were available in very few schools till the year 2001.
- More students were getting the benefit under Mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 223.
- Almost all schools in rural areas were having Village Education Committees.
- AEC, SMC and PTA were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil teacher ratio was higher in urban schools than rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Very few teachers were having educational qualification below Class X level.
- Majority of teachers had diploma/certificate in primary/elementary education.
- In general, teaching aids were available to more female teachers than male teachers.
- Majority of teaching aids were available to more than 90% teachers.
- Maximum in-service training programmes were conducted by Block Resource Centre.

- Maximum in-service training programmes were conducted on 'Competency based Teaching-learning and minimum on 'Use of Instructional Material' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately 28% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas. However, in urban areas majority of fathers were skilled worker and mothers were housewives in urban areas.
- In most of cases teachers were getting assistance always from 'Head of Schools'.
- For approximately 75% students, medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members.
- Rural girls were getting more academic assistance from fathers than boys.
- In general educational qualification of mother was poorer than father. However, the percentage of mothers having educational qualification degree or higher was more than fathers.
- Approximately 92% students were attending schools above 70% working days and less than 3% students were attending schools below 60% of the total working days.
- Performance of urban students was significantly better than rural students in EVS and mathematics only.
- Girl students performed significantly better than boys in EVS only.
- ST category students performed significantly better than SC students in mathematics only.
- Active involvement of school organisation, use of teaching aids and teacher's qualification helped the children in improving their learning achievement in the three subjects.
- Active involvement of teachers in the class also helped the children in improving their learning achievement in the three subjects.
- PTR is negatively associated with the achievement of students in the three subjects. It indicates that larger the class - size, poorer is the performance of students.

INTRODUCTION

Delhi is the capital of India. It is bounded in North-West and South by Haryana and in the East by Uttar Pradesh. Delhi, presently known as the National Capital Territory of Delhi comprised of nine revenue districts and twenty seven *tehsils*. There are twelve educational districts in Delhi. The urban areas of Delhi comprise of three statutory towns, namely (i) New Delhi Municipal Council (ii) Delhi Cantonment (iii) Delhi Municipal Corporation. The rural areas of Delhi comprise of 165 villages.



In Delhi, schools function under different bodies. There are 1887 Municipal Corporation schools, 87 New Delhi Municipal Council schools, and 970 Delhi Administration schools which includes 343 primary schools located in Sarvodaya Senior Secondary schools. Six primary schools fall under Delhi Cantonment Board. About 17,000 teachers are

working in MCD schools and 2,500 in Delhi Administration Primary Schools. There are 9 lakh children in MCD and NDMC primary schools and 1.4 lakh in Delhi Administration Primary Schools. The number of students studying in all Classes (I-XII) in Delhi administration schools is 9.5 lakh. Non-detention Policy is in force till Class V in all Govt. schools.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total of 200 schools were sampled from Delhi. Out of total sampled schools 56 schools were from rural areas and remaining 144 from urban areas.

Areawise and management wise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	56	18	32.14	0	0	38	67.86
Urban	144	41	28.47	0	0	103	71.53
Total	200	59	29.5	0	0	141	70.50

Teachers

A total of 423 teachers were sampled from 200 sampled schools. Out of 423 teachers, 109 teachers were male and 314 teachers were female. Areawise, 116 teachers were from rural areas and 307 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	16	34.04	0	0	12	25.53	19	40.43	47
	Female	8	11.59	1	1.45	10	14.49	50	72.46	69
	Total	24	20.69	1	0.86	22	18.97	69	59.48	116
Urban	Male	11	17.74	1	1.61	10	16.13	40	64.52	62
	Female	25	10.2	0	0	21	8.57	199	81.22	245
	Total	36	11.73	1	0.33	31	10.1	239	77.85	307
Total	Male	27	24.77	1	0.92	22	20.18	59	54.13	109
	Female	33	10.51	1	0.32	31	9.87	249	79.3	314
	Total	60	14.18	2	0.47	53	12.53	308	72.81	423

Table 2 shows that the percentage of male teachers was higher than female teachers in case of SC, ST and OBC categories. However, this trend was reverse in Others category. In rural areas 20.69%, 0.86%, 18.97% and 59.48% teachers were of SC, ST, OBC and

Others categories respectively. In urban areas 11.73%, 0.33%, 10.1% and 77.85% teachers were from SC, ST, OBC and Others categories respectively. In urban areas, the number of female teachers was more than male teachers.

Students

A total number of 5,876 students appeared in each of three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the sampled students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
New Delhi (Darya Ganj)	Rural	0	30	30
	Urban	709	738	1447
	Total	709	768	1477
West -A (Rohini)	Rural	96	130	226
	Urban	639	568	1207
	Total	735	698	1433
North -West - B (Rajinder Nagar)	Rural	171	262	433
	Urban	534	516	1050
	Total	705	778	1483
North -East (Trans Yamuna)	Rural	509	438	947
	Urban	218	318	536
	Total	727	756	1483
Total	Rural	776	860	1636
	Urban	2100	2140	4240
	Total	2876	3000	5876

Out of 5,876 students, 1,636 students were from rural areas and remaining 4,240 students were from urban areas. Out of the total sample, 2,876 were boys and 3,000 were girls students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
			N	%	N	%	N	%	N	%
Rural	22	39.29	43	76.79	0	0	1	1.79	12	21.43
Urban	73	50.69	99	68.75	2	1.39	3	2.08	40	27.78
Total	95	47.5	142	71	2	1	4	2	52	26

Table 4 indicates that out of 56 rural sampled schools, pre-schools were attached with 22 schools whereas in urban areas, out of 144 sampled schools, the same was

attached with 73 schools. Further, approximately 77% schools in rural areas and 69% schools in urban areas were only primary schools. The percentage of primary schools attached with secondary and senior secondary was 2% and 26% respectively.

Facilities related to teaching-learning process

It was observed that in approximately 95% to 98% schools play material and toys, game equipment, maps, globes, charts, game equipment and children's books were available to facilitate teaching-learning process. Besides, primary science kit, reference books, dictionaries and encyclopedias were available in 83% to 86% schools. However, mini tool kit, and maths kit were available in 63% to 69% schools. Further, magazine, journals, newspapers were available only in 48% of the total sampled schools.

Infrastructural facilities

It was observed that blackboards, school bell, chairs for teachers, chalk and duster, water pitchers, ladel and glasses and dustbins were available in more than 92% schools. Further, tables for teachers and pin up board/notice board were available in 71% to 77% schools. Besides, play ground was available in 81% schools. However, musical instruments were available only in 62% schools.

Ancillary Facilities

Computer was available in only 15% schools. Annual medical check-up and toilet facilities for children were available in 99% schools. Further, electric connection, safe drinking water and first-aid kit were available in more than 91% schools. However, separate toilet for girls was available in 73% schools. T.V. was available in 62% schools. Immunisation facility was available in 89% schools.

Competency-based Teaching Materials

Information gathered shows that out of 200 schools, competency based textbooks were available in 75 to 76 schools for Classes I to V in the year 2001 as compared to 2 to 5 schools in the year 2000. Workbooks were available in 56 to 59 schools for Classes I to V in the year 2001 against 2 to 4 schools in the year 2000. Further, Teacher's Handbooks for Classes I to V were available from 29 to 34 schools. Besides, teaching-aids for Classes I to V were available in 42 to 48 schools. These all facilities were available more in Trans Yamuna area compared to other sampled areas except workbooks which were more available in Rajendra Nagar area.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes in 200 schools.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	7458	8348	33	15	2245	3666	19699	29016	29435	41045
	%	25.34	20.34	0.11	0.04	7.63	8.93	66.92	70.69	100	100
Free uniform	N	7540	7869	104	102	2289	3032	20126	27709	30059	38712
	%	25.08	20.33	0.35	0.26	7.62	7.83	66.95	71.58	100	100
Free textbooks	N	8265	8420	180	150	2579	3510	22842	29914	33866	41994
	%	24.41	20.05	0.53	0.36	7.61	8.36	67.45	71.23	100	100
Scholarship for regular attendance	N	753	547	49	126	237	453	2021	2284	3060	3410
	%	24.60	16.04	1.60	3.70	7.75	13.28	66.05	66.98	100	100
Other Schemes	N	1249	778	18	93	370	295	3535	2943	5172	4109
	%	24.15	18.93	0.35	2.26	7.15	7.18	68.35	71.63	100	100

Various schemes like mid-day meal, free uniform, free textbook, scholarship for regular attendance, etc., are fairly and largely available to the pupils across the categories. Both boys and girls from the Others category are getting maximum benefit from all the schemes mentioned above.

Instructional time

Average number of working days in schools was approximately 204. On an average, schools were having 7 periods in a day of approximately 35 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 56 rural schools, only one school was having Village Education Committees (VEC). Parent-Teacher Association (PTA) was found almost same in rural and urban schools, whereas, Area Education Committee (AEC) was more in term of percentage in urban than rural schools. Besides, School Management Committees (SMC) were more in urban areas than rural areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	1	2	3
	%	1.79	1.39	1.5
AEC	N	8	23	31
	%	14.29	15.97	15.5
SMC	N	14	52	66
	%	25	36.11	33
PTA	N	53	136	189
	%	94.64	94.44	94.5
Total sampled schools	N	56	144	200
	%	100	100	100

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	56	234	31.79	502	68.21	736	13.14	42
Urban	144	480	25.65	1391	74.35	1871	12.99	41
Total	200	714	27.39	1893	72.61	2607	13.04	41

Table 7 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas was approximately 13. Pupil-Teacher ratio in rural schools was higher than urban schools.

Educational Qualification

The percentage of male teachers holding PG degree was higher than female teachers. Nearly, 50% teachers were post-graduates. However, not a single teacher had qualification below senior secondary level.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	0	0	9	8.26	37	33.94	63	57.8	109
Female	0	0	0	0	35	11.15	137	43.63	142	45.22	314
Total	0	0	0	0	44	10.4	174	41.13	205	48.46	423

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level upto which they had studied Mathematics, Science, Language and Social Science.

Table 9: The Level upto which various subjects studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	3	2.75	50	45.87	24	22.02	32	29.36	109
	Female	42	13.38	93	29.62	138	43.95	41	13.06	314
	Total	45	10.64	143	33.81	162	38.3	73	17.26	423
Science	Male	10	9.17	34	31.19	29	26.61	36	33.03	109
	Female	46	14.65	128	40.76	87	27.71	53	16.88	314
	Total	56	13.24	162	38.3	116	27.42	89	21.04	423
Language	Male	1	0.92	14	12.84	46	42.2	48	44.04	109
	Female	3	0.96	52	16.56	76	24.2	183	58.28	314
	Total	4	0.95	66	15.6	122	28.84	231	54.61	423
Social Science	Male	10	9.17	48	44.04	12	11.01	39	35.78	109
	Female	27	8.6	102	32.48	62	19.75	123	39.17	314
	Total	37	8.75	150	35.46	74	17.49	162	38.3	423

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. This trend was reverse in case of Language and Social Science. The percentage of male teachers having secondary qualification in Mathematics and Social Science was higher than female teachers. The percentage of female teachers who studied Science and Language below Senior Secondary was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
200	Male	46	74	2
	Female	132	197	15
	Total	178	271	17

Approximately 64% teachers were B.Ed. degree holders and very few teachers had M.Ed. degree. Female teachers were more qualified than male teachers.

Availability of Teaching Aids

Teachers guide, dictionary, books other than textbooks were more available to teachers teaching in rural schools than teachers teaching in urban schools. In contrast to this, maps, globe, charts, flash cards, science kit, mathematics kit and other teaching aids were more available to urban school teachers than teachers in rural areas.

In-service Training

The account of in-service training programmes attended by teachers during last three years.

Table 11: In-service Training Programmes

Organisers who provided training		Total No. of Teachers
1. School Complex	N	17
	%	4.2
2. Block Resource Centre	N	26
	%	6.15
3. Teacher Resource Centre	N	46
	%	10.87
4. Cluster Resource Centre	N	2
	%	0.47
5. DIET	N	97
	%	22.93
6. SCERT	N	7
	%	1.65
7. Others	N	44
	%	10.40

Out of 423 teachers, maximum 97(22.93%) teachers were trained by DIET and followed by Teacher Resource Centre 46(10.87%) and 44(10.4%) by Other sources. However, only 2(0.47%) teachers were trained by Cluster Resource Centre only.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	58
2. Content Enrichment	56
3. Production of Instructional Material	3
4. Use of Instructional Material	2
5. Assessment of Pupil Learning	4
6. Competency based Teaching Learning	16
7. Activity based Joyful Learning	18
8. Others	74

During in-service training programme number of themes were covered i.e., general training programme content enrichment, production of instructional material and use of instructional material, assessment of pupil's learning etc. The maximum number of programmes were organised on the theme-General Training Programme i.e., 58 and Content Enrichment i.e., 56. However, minimum programme was conducted on 'Use of Instructional Material'. The effectiveness of various training programme is given in Table 13.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	66	60	65	55
	%	33.33	30.30	33.00	27.78
Average	N	127	128	121	130
	%	64.14	64.14	61.11	65.65
Low	N	5	10	12	13
	%	2.52	5.05	6.06	06.56

It is evident that approximately 2/3 teachers training programmes were Average in terms of utility of knowledge. Also impact of these training programme was rated as Average by almost 2/3 teacher in different subjects. The improvement in teaching skills in all subjects due to those training programmes was rated high by approximately 1/3 teachers.

Out of 423 sampled teachers, 225 teachers were without any in-service training during last three years. Percentage of males who have not attended any in-service training programme was more than female teachers. The percentage of teachers without in-service training was more in urban areas than rural areas.

Academic Assistance received from Various Sources

In the state, various committees have been constituted to provide assistance to teachers to improve quality education. The information collected regarding this aspect was analysed. Analysis shows that teachers in rural and urban areas were getting maximum 'Always' assistance from Head of the School and followed by other teachers of the schools. However, teachers of rural and urban schools were getting assistance some times from Cluster Resource Coordinators, Block Resource Coordinator and DIET. Further, a few teachers both in rural and urban areas were getting assistance from DIETs.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 90% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0.Not Applicable	226	0.44	234	03.98
1.Illiterate	648	11.03	1934	32.91
2.Literate	303	05.15	422	7.18
3.Primary	649	11.04	782	13.31
4.Secondary	1900	32.33	1348	22.94
5.Sr. Secondary	927	58.76	437	07.44
6.Degree and above	662	11.27	262	04.46
7.Donot Know/Cannot say	561	9.55	457	07.78

Table 14 indicates that approximately 11% fathers and approximately 33% mothers of the students were illiterate. Only 11% fathers and 4% mothers were having degree or higher educational qualification. Parents educated upto senior secondary level were maximum as compared to others. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Occupation of Parents

Information regarding occupation of father, mother and guardian of the students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	56	202	258	33	136	169
Household/ Housewife	1	7	8	1302	3263	4565
Farmer	17	37	54	11	19	30
Poultry farming	4	13	17	0	9	9
Agricultural labour	13	43	56	3	5	8
Picking forest produce	3	15	18	2	2	4
Domestic Servent	13	62	75	41	215	256
Street Vender	114	239	353	10	13	23
Manual unskilled worker	173	384	557	62	120	182
Skilled worker	469	1263	1732	76	182	258
Clerical worker	58	283	341	2	31	33
Shopkeeper	215	582	797	14	45	59
Employer	44	172	216	0	10	10
Manager/Senior Officer	98	222	320	14	42	56
Others	358	716	1074	66	148	214

Approximately 78% mothers were housewives and 59% fathers were skilled worker. Only a few fathers and mothers were associated with poultry farming. Fathers' occupation in decreasing order was skilled worker, shop keeper, manual unskilled worker, manager/senior officer, street vendor and clerical worker, etc.. Mothers occupation in decreasing order was household/housewife, skilled worker, domestic servant, manual unskilled worker, shopkeeper etc.

Academic Assistance

The information collected from the students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	219	277	717	740	936	1017
	%	28.22	32.21	34.14	34.58	32.55	33.9
Mother	N	108	180	548	506	656	686
	%	13.92	20.93	26.1	23.64	22.81	22.87
Elder Brother/Sister	N	150	220	609	497	759	717
	%	19.33	25.58	29	23.22	26.39	23.9
Others	N	186	215	499	511	685	726
	%	23.97	25	23.76	23.88	23.82	24.2

The percentage of girls in rural areas get more help than boys from all family members. The maximum contribution is from father/guardian. In urban areas boys get more academic assistance from mother and elder brother/sister than girls.

Attendance

Attendance plays an important role in learning. It may be observed that the percentage of girls having attendance 90% to 100% was higher than boys both in rural and urban areas. Overall, approximately 80% students were attending schools on 80% and above working days. Further, students attending schools on 80% and above working days were more in urban areas than rural areas.

STUDENTS ACHIEVEMENT

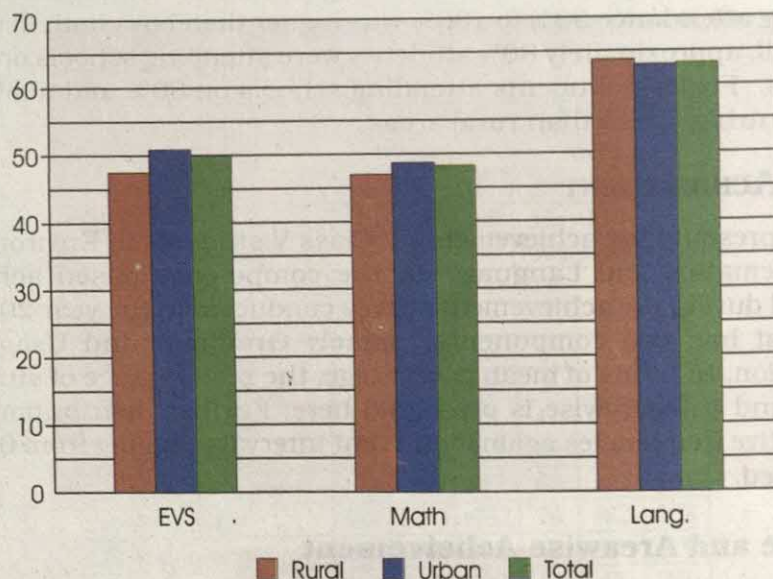
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Delhi. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

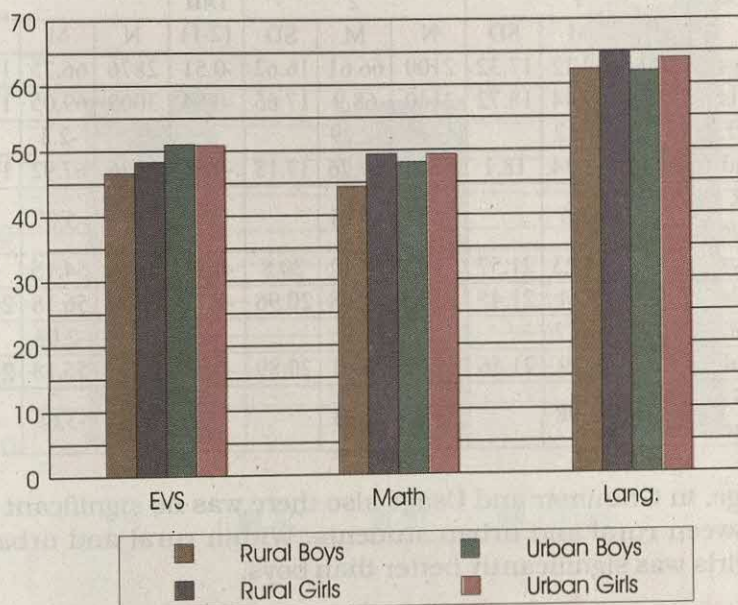
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	776	46.64	18.52	2100	50.98	19.52	4.34	2876	49.81	19.35	5.5
	Girls	860	48.31	20.65	2140	50.83	19.39	2.52	3000	50.11	19.79	3.08
	Diff.		-1.67			0.15				-0.3		
	Total	1636	47.52	19.68	4240	50.9	19.45	3.38	5876	49.96	19.57	5.92
	CR Value		-1.72			0.25				-0.59		
Mathe- matics	Boys	776	44.38	17.22	2100	48.06	20.2	3.68	2876	47.07	19.51	4.85
	Girls	860	49.33	20.5	2140	49.28	19.68	-0.05	3000	49.29	19.91	-0.06
	Diff.		-4.95			-1.22				-2.22		
	Total	1636	46.98	19.17	4240	48.67	19.95	1.69	5876	48.2	19.75	2.99
	CR Value		-5.3			-1.99				-4.32		
Language	Boys	776	62.28	16.46	2100	61.92	16.38	-0.36	2876	62.02	16.4	-0.52
	Girls	860	64.92	17.72	2140	63.94	17.06	-0.98	3000	64.22	17.25	-1.38
	Diff.		-2.64			-2.02				-2.2		
	Total	1636	63.67	17.18	4240	62.94	16.76	-0.73	5876	63.15	16.88	-1.47
	CR Value		-3.12			-3.93				-5.01		

Mean Achievement of Students-Areawise

Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that there was no significant difference in achievement between boys and girls. The performance of urban students, both boys and girls, was significantly better than their counterparts in rural areas. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Mathematics

In Mathematics, the achievement of urban students was significantly better than rural students. There was no significant difference in achievement of rural and urban girls. In both rural and urban areas, the performance of girls was significantly better than boys.

Language

In Language there was no significant difference in achievement between rural and urban students. The performance of girls in both rural and urban areas was significantly better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Area-wise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Gram - mar & Usage	Boys	776	67.12	17.32	2100	66.61	16.62	-0.51	2876	66.75	16.81	-0.71
	Girls	860	69.44	18.72	2140	68.9	17.65	-0.54	3000	69.05	17.96	-0.73
	Diff.		-2.32			-2.29				-2.3		
	Total	1636	68.34	18.1	4240	67.76	17.18	-0.58	5876	67.92	17.44	-1.12
	CR Value		-2.6			-4.35				-5.07		
Compre - hension	Boys	776	54.23	21.57	2100	54.12	20.8	-0.11	2876	54.15	21	-0.12
	Girls	860	57.4	21.45	2140	55.68	20.96	-1.72	3000	56.18	21.11	-2.00
	Diff.		-3.17			-1.56				-2.03		
	Total	1636	55.9	21.56	4240	54.91	20.89	-0.99	5876	55.18	21.08	-1.59
	CR Value		-2.98			-2.43				-3.69		

As in language, in Grammar and Usage also there was no significant difference in achievement between rural and urban students. Within rural and urban areas, the achievement of girls was significantly better than boys.

Reading Comprehension

In reading comprehension, achievement of rural girls was significantly better than urban girls. Within rural and urban areas, the performance of girls was significantly better than boys.

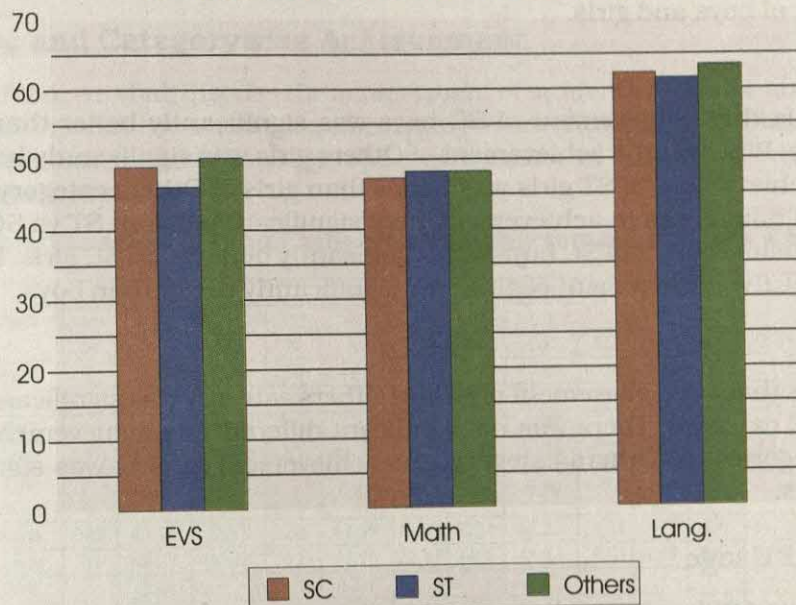
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

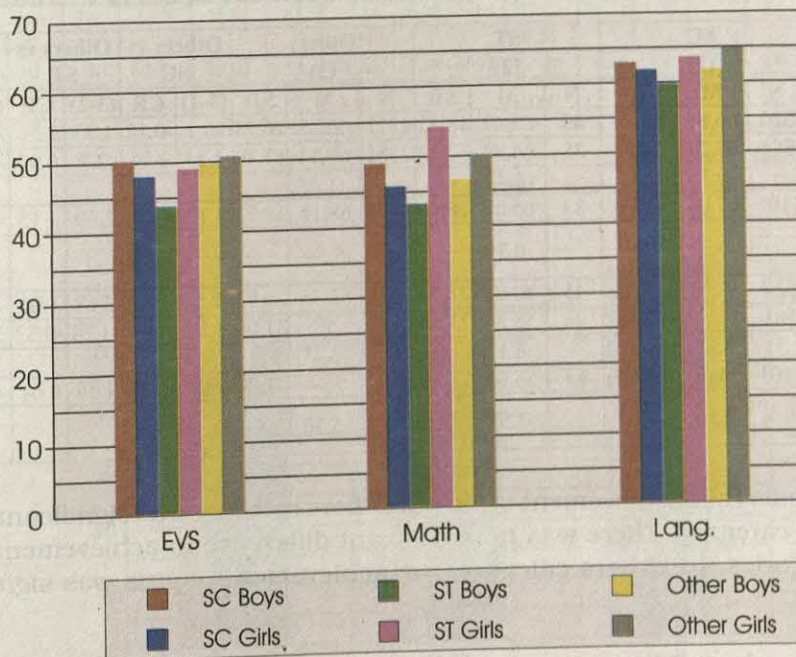
Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	520	50.2	20.57	45	43.72	19.68	2311	49.84	19.04	-0.36	-0.37	6.12	2.07	-6.48	-2.11
	Girls	581	47.97	21.13	38	49.01	19.87	2381	50.64	19.42	2.67	2.77	1.63	0.5	1.04	0.31
	Diff.		2.23			-5.29			-0.8							
	Total	1101	49.02	20.89	83	46.14	19.83	4692	50.25	19.23	1.23	1.78	4.11	1.87	-2.88	-1.27
	CR Value		11.77			-1.21			-1.43							
Mathe - matics	Boys	520	49.07	19.86	45	43.22	23.31	2311	46.69	19.33	-2.38	-2.48	3.47	0.99	-5.85	-1.63
	Girls	581	45.72	19.82	38	54.16	20.45	2381	50.09	19.83	4.37	4.76	-4.07	-1.22	8.44	2.47
	Diff.		3.35			-10.94			-3.4							
	Total	1101	47.3	19.9	83	48.22	22.59	4692	48.42	19.66	1.12	1.68	0.2	0.08	0.92	0.36
	CR Value		2.80			-2.28			-5.95							
Langu - age	Boys	520	62.88	16.29	45	59.67	16.94	2311	61.87	16.42	-1.01	-1.28	2.2	0.86	-3.21	-1.22
	Girls	581	61.75	17.49	38	63.62	17.24	2381	64.84	17.15	3.09	3.83	1.22	0.43	1.87	0.65
	Diff.		1.13			-3.95			-2.97							
	Total	1101	62.28	16.93	83	61.48	17.09	4692	63.38	16.86	1.1	1.94	1.9	1	-0.8	-0.41
	CR Value		1.11			-1.05			-6.06							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data given in Table 19 reveals that there was no significant difference in achievement of students categorywise. The performance of SC boys was better than boys of Others category followed by ST boys, and the differences in achievement were significant between Others vs ST and ST vs SC. In case of girls, achievement of girls of Others category was

significantly better than SC girls. Within categories, there was no significant difference in achievement of boys and girls.

Mathematics

The data reveals that achievement of SC boys was significantly better than boys of Others category. Whereas the achievement of Others girls was significantly better than SC girls. The achievement of ST girls was better than girls of Others category followed by SC girls and differences in achievement were significant between ST vs SC. Within categories, the achievement of SC boys was significantly better than SC girls. In ST and Others category, the achievement of girls was significantly better than boys.

Language

The data reveals that the achievement of girls of Others category was significantly better than girls of SC category. There was no significant difference in achievement of boys across the categories. In Others category, the achievement of girls was significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Boys	520	66.85	17.26	45	65.42	15.82	2311	66.75	16.73	-0.1	-0.12	1.33	0.56	-1.43	-0.58
	Girls	581	67.21	18.58	38	66.84	17.37	2381	69.54	17.79	2.33	2.73	2.7	0.95	-0.37	-0.13
	Diff.		-0.36			-1.42			-2.79							
	Total	1101	67.04	17.96	83	66.07	16.46	4692	68.16	17.33	1.12	1.87	2.09	1.15	-0.97	-0.51
	CR Value		-0.33			-0.39			5.54							
Reading Comprehension	Boys	520	56.27	20.98	45	50.07	23.55	2311	53.75	20.93	-2.52	-2.48	3.68	1.04	-6.2	-1.71
	Girls	581	52.66	20.82	38	58.24	23.39	2381	57	21.06	4.34	4.49	-1.24	-0.32	5.58	1.43
	Diff.		3.61			-8.17			-3.25							
	Total	1101	54.36	20.97	83	53.81	23.69	4692	55.4	21.06	1.04	1.48	1.59	0.61	-0.55	-0.21
	CR Value		2.86			-1.58			-5.30							

The data reveals that achievement of girls of Others category was significantly better than girls of SC category. There was no significant difference in achievement of boys across the categories. In Others category, the achievement of girls was significantly better than boys.

Reading Comprehension

The data reveals that the achievement of SC boys was significantly better than boys of Others category, whereas girls of Others category performed significantly better than girls of SC category. In SC category, achievement of boys was significantly better than girls whereas in Others category, achievement of girls was significantly better than boys.

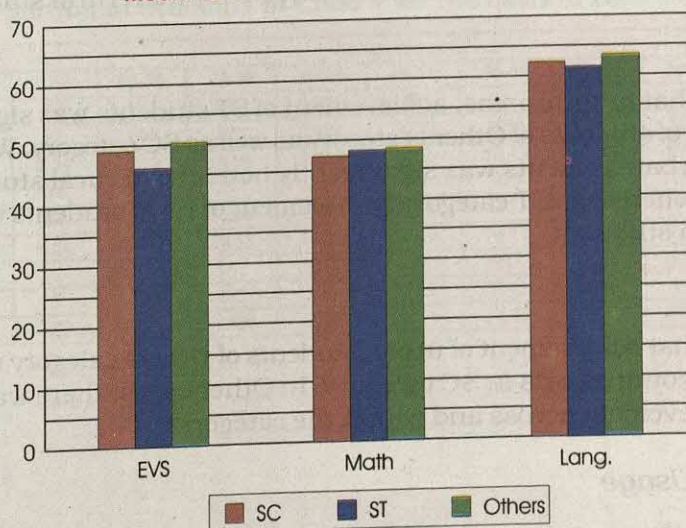
Areawise and Categorywise Achievement

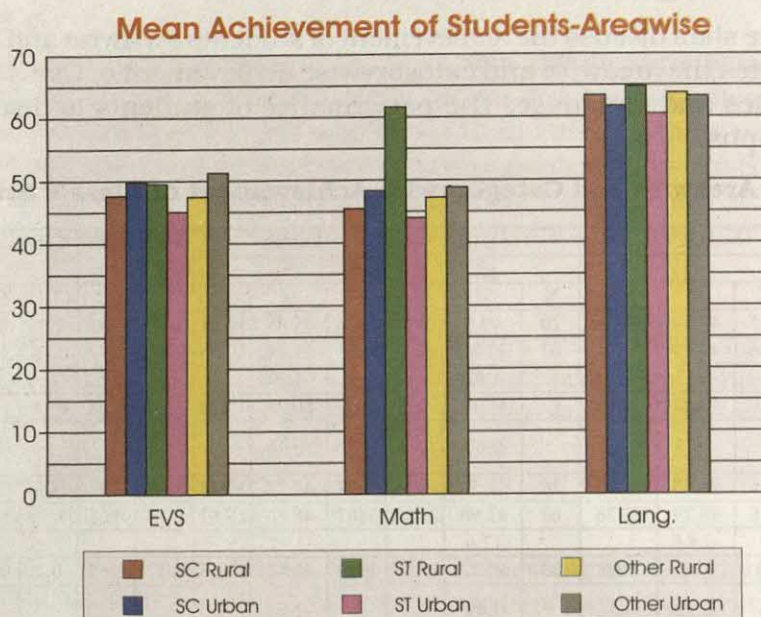
In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	385	47.64	20.34	20	49.5	19.84	1231	47.45	19.48	-0.19	-0.16	-2.05	-0.46	1.86	0.41
	Urban	716	49.77	21.15	63	45.08	19.86	3461	51.24	19.05	1.47	1.72	6.16	2.44	-4.69	-1.79
	Diff.		-2.13			4.42			-3.79							
	Total	1101	49.02	20.89	83	46.14	19.83	4692	50.25	19.23	1.23	1.78	4.11	1.87	-2.88	-1.27
	CR Value		-1.63			0.87			-5.90							
Mathematics	Rural	385	45.45	18.85	20	61.58	18.81	1231	47.22	19.18	1.77	1.6	-14.36	-3.39	16.13	3.74
	Urban	716	48.29	20.38	63	43.98	22.15	3461	48.84	19.81	0.55	0.66	4.86	1.73	-4.31	-1.49
	Diff.		-2.84			17.6			-1.62							
	Total	1101	47.3	19.9	83	48.22	22.59	4692	48.42	19.66	1.12	1.68	0.2	0.08	0.92	0.36
	CR Value		-2.32			3.49			-2.52							
Language	Rural	385	63.36	16.83	20	64.75	18.95	1231	63.75	17.27	0.39	0.39	-1	-0.23	1.39	0.32
	Urban	716	61.7	16.97	63	60.44	16.48	3461	63.24	16.71	1.54	2.22	2.8	1.34	-1.26	-0.58
	Diff.		1.66			4.31			0.51							
	Total	1101	62.28	16.93	83	61.48	17.09	4692	63.38	16.86	1.1	1.94	1.9	1	-0.8	-0.41
	CR Value		1.56			0.91			0.90							

Mean Achievement of Students-Categorywise





Environmental Studies

The data reveals that there was no significant difference in achievement of rural and urban students across the categories. Within categories only Others category achievement of urban students was significantly better than rural students.

Mathematics

The data reveals that in rural areas, achievement of ST students was significantly better than achievement of students of Others category as well as SC category. Within categories, achievement of urban students was significantly better than rural students in SC and Others category, whereas in ST category achievement of rural students was significantly better than urban students.

Language

The data reveals that achievement of urban students of Others category was significantly better than their counterparts in SC category. In Other cases, there was no significant difference in achievement across and within the categories.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		ST vs SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Rural	37	67.24	19.13	867	66.76	18.84	387	63.89	17.18	-3.35	-1.03	-2.87	-2.65	-0.48	-0.15
	Urban	6	60	19.27	115	56.31	15.04	159	58.34	18.59	-1.66	-0.21	2.03	1	-3.69	-0.46
	Diff.		7.24			10.45			5.55							
	Total	43	66.23	19.09	982	65.54	18.73	546	62.27	17.77	-3.96	-1.32	-3.27	-3.38	-0.69	-0.23
	CR Value		0.85			6.78			3.24							
Reading Comprehension	Rural	37	63.96	14.27	867	56.74	18.8	387	55.73	16.51	-8.23	-3.3	-1.01	-0.96	-7.22	-2.97
	Urban	6	56.66	20.11	115	53.91	16.51	159	53.96	18.4	-2.7	-0.32	0.05	0.02	-2.75	-0.33
	Diff.		7.3			2.83			1.77							
	Total	43	62.95	15.14	982	56.41	18.56	546	55.21	17.08	-7.74	-3.2	-1.2	-1.28	-6.54	-2.74
			0.85			1.70			1.05							

The data reveals that in rural areas, achievement of students of ST category was significantly better than students of Others category. However, within the categories achievement of rural students of ST category was significantly better than their urban counterparts.

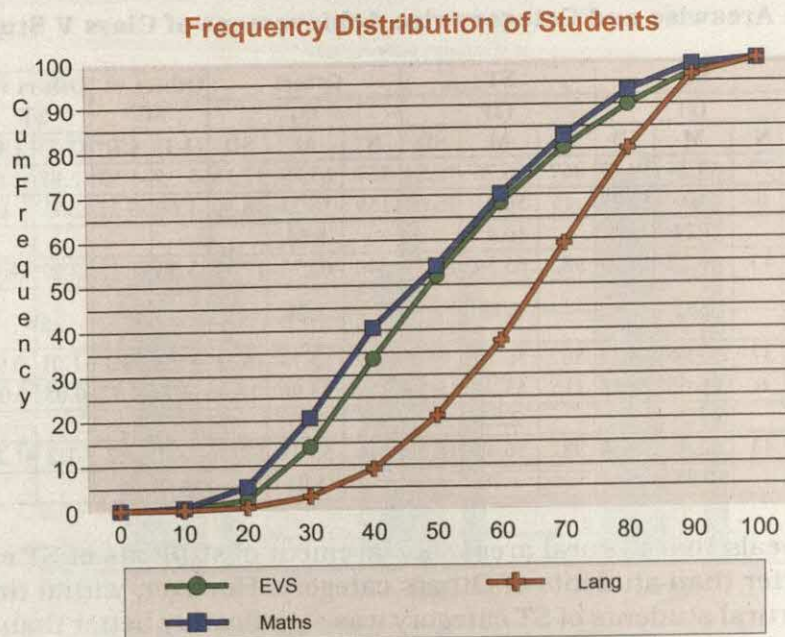
Reading Comprehension

The data reveals that in rural areas, achievement of students of SC category was significantly better than students Others and ST category.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23 Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	14	127	685	1148	1085	947	719	557	422	172
	cf	14	141	826	1974	3059	4006	4725	5282	5704	5876
	cf(%)	0.24	2.40	14.06	33.59	52.06	68.18	80.41	89.89	97.07	100
Maths	f	34	275	897	1174	804	939	751	594	336	72
	cf	34	309	1206	2380	3184	4123	4874	5468	5804	5876
	cf(%)	0.58	5.26	20.52	40.50	54.19	70.17	82.95	93.06	98.77	100
Language	f	5	33	137	357	693	978	1265	1240	962	206
	cf	5	38	175	532	1225	2203	3468	4708	5670	5876
	cf(%)	0.09	0.65	2.98	9.05	20.85	37.49	59.02	80.12	96.49	100



The figures posted in Table 23 revealed that in all the three subjects, the distribution of scores covered the entire range from 0-100 percent. The minimum number of cases in EVS (14), in Mathematics (34) and in Language (5) were all in the range 0-10 percent. The maximum number of cases in EVS (1148), in Mathematics (1174) and in Language (1265) were in the range 30-40 percent, and 60-70 percent respectively. 47.94% students in EVS, 45.81% in mathematics and 79.15% in language scored more than 50% marks where as 31.82% in EVS, 29.83% in mathematics and 62.51% in language scored more than 60% marks.

CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24 Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	1
25 to less than 50	Difficult	22	10	20
50 to less than 75	Average	17	21	16
75 to 100	Very Easy	1	9	1

Most of items appeared to be of average difficulty, and difficult. In Mathematics difficult areas were fractions, decimal system and conversion of units.

Table 25 Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
1.00 to .70	Good Discrimination	0	0	1
.30 to less than .70	Average Discrimination	38	35	35
Less than .30	Poor Discrimination	2	5	2

Most of the items were discriminating adequately.
The reliability of tests is as given below:

Table 26 Reliability co-efficient of tests

S. No.	Name of the test	No. of items	Reliability	
			Spelt half	K.R.-20
1	EVS	40	0.82	0.87
2	Mathematics	38	0.75	0.87
3	Language	40	0.73	0.85

The reliability co-efficient for EVS, Language and Mathematics were .82, .73 and .75 respectively.

IMPACT OF INTERVENING VARIABLES School Related Variables

Availability of teaching aids, number of teachers in school, percentage of female teachers in school, pupil-teacher ratio, number of working days, teaching time, teaching days in school, physical and ancillary facilities in school, availability of competency-based teaching-learning material in school, involvement of community through various committees influence the children in improving their learning achievement in the three subjects.

Table 27 Regression and Correlation Co-efficient of the Predictors of School related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	59.177	--	89.963	--	92.137	--
PTR	-0.064	-0.034	-0.113	-0.085	0.055	-0.010
Com_Participation	0.706	0.034	0.484	0.020	0.408	0.037
Teach-aid	0.084**	0.014*	0.855	0.087	0.668	0.037
Physical facility	0.0345	0.009	0.028	0.030	0.224	0.038
Ancillary facility	1.410	0.060	0.031	0.035	0.098	0.087
Instructional time	0.020	0.068	0.037	0.011	0.011	0.047
Working day	0.028	0.015	0.300**	0.020*	0.135	0.013
Index-Comp. TLM	0.410	0.048	0.045	0.073	0.185	0.021
R²	0.066		0.076		0.034	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 6.6% of total variance in EVS, 7.6% in mathematics and 3.4% in language

Teacher Related Variables

Teaching aids and teaching style of teachers in the school influence the learning achievement of children in EVS and Mathematics. The positive association of this variable with these two criteria indicates that use of teaching aids and giving home work to children improve their learning skills in EVS and mathematics.

Table 28 Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	51.523	--	49.907	--	61.294	--
Index- Qualification	0.022	0.025	0.055	0.011	0.241	0.090
Index-Experience	0.106	0.070	0.037	0.006	0.738	0.048
Index-Teaching Aid	3.506**	0.112*	4.192**	0.140**	1.700	0.094
Index-School Org.	0.032	0.025	0.157	0.001	0.158	0.056
R²	0.028		0.034		0.020	

*Significant at 0.05 level **Significant at 0.05 level

The predictors explain 2.8% of total variance in EVS, 3.4% of total variance of Math and 2% in language.

Pupil Related Variables

The teaching-learning processes adopted by teachers in school, percentage attendance of children in school, age of children and educational status and occupation of parents influence the learning achievement of children in three subjects. The positive association of teaching-learning processes adopted by teachers in school, percentage attendance of children in school with the three criteria indicates that active involvement of teachers in school and attending school regularly by the children help them in improving their learning achievement in three subjects. The positive association of educational status and occupation of parents with the criteria EVS and language indicates that the educated parents help the children at home. Children of higher age group perform poorly.

Table 29 Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

*significant at 0.05 level

**Significant at 0.01 level

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	35.003	--	45.003	--	57.294	--
Index-Ed & Occu	0.550	0.014	0.998**	0.008	0.719*	0.024
Index-Schooling	0.300	0.003	0.887	0.009	0.066*	0.015
Index-TLP	3.025**	-0.100**	2.980*	0.056**	1.090*	0.041**
Age	-0.500**	-0.030*	-0.364	-0.018	-0.198	-0.011
Detention	-0.805**	-0.069**	-0.312	-0.071**	-0.095*	-0.043**
Attendance	0.077*	0.052**	0.066	0.026	0.044**	0.035**
R²	0.018		0.042		0.006	

The predictors explain 1.8% of total variance in EVS, 2.6% in Mathematics and 0.6% in Language.

One can infer that teaching-learning processes adopted by teachers in school, percentage attendance of children in school help them to some extent in improving their learning achievement in the three subjects.

HARD SPOT OF LEARNING

In EVS, no item was found very difficult. However, 22(55%) items were correctly responded to by less than 50% of students and identified difficult. Contentwise the hard spots in EVS was identified as identification of a state on the map, identification of natural features of the country, identification of boundaries with neighbouring countries, understanding of longitude and latitude, representative of a president in a state, judicial functions of courts, system of governance in India, knowledge of postal services, knowledge of UN days, farmers' role in freedom struggle, knowledge of solar system and planets, understanding of eclipse, knowledge of composition of air, knowledge of pollution free fuel, knowledge of soil erosion, effects of deforestation, effect of weather conditions on human bodies, identification of simple machine and knowledge of carriers of disease.

In Language, no item was found very difficult. But 10(25%) items were correctly responded to by less than 50% students and identified as difficult. Contentwise, the hard spot in learning language was found in structure, comprehension of instruction and timetable and informatical passage and comprehension of story.

In Mathematics, only item no. 23 was found very difficult. However, 20(53%) items were correctly responded to by less than 50% of students and found difficult. Contentwise the items were identified as HCF, LCM, descending and ascending order in fraction, division, unitary method, triangle according to angles, time, conversion to lowest term, simplification, word problems fraction on comparison, word problem on subtraction, percentage, BODMAS, rounding of numbers, area of square and triangle according to sides.

FINDINGS

- Number of female teachers was more than male teachers in urban sampled schools.
- In urban areas, pre-primary classes were attached with 50% schools
- In rural areas, elementary school having primary section could not be sampled.
- Maps and children books were available in almost all schools.
- Chalk and dusters were available in all schools.
- T.V. were more available than computers, but it was available in 15% schools.
- Girls were receiving more facilities under mid-day meal and free uniform incentive schemes as compared to boys.
- Parent Teacher Association was almost same in urban and rural schools.
- Average teachers per school was 13.
- Pupil-Teacher ratio was higher in rural schools than urban schools.
- Nearly half of the teachers were PG Degree holders.
- No teacher was qualified below Senior Secondary level.
- Percentage of female teachers who studied Maths, Science and Language below Sr. Secondary level was higher than male teachers.
- The percentage of female teachers who studied language upto degree level was more than their counterparts.
- Approximately 66% teachers were B.Ed. degree holders.
- Female teachers were more professionally qualified than male teachers
- Majority of teaching aids were available more in urban schools than rural schools.
- Teaching aids were available more to female teachers than male teachers.

- DIET organised maximum in-service programmes.
- Approximately 50% teachers have not attended any in-service training programme during last three years.
- Teachers were getting more Assistance from 'Head of School and other teachers of school as compared with other sources.
- More than half of the fathers of students were educated upto senior secondary level.
- Educational level of mothers was poorer than fathers.
- Majority of mothers were housewives.
- A large number of fathers were skilledworker.
- Students get more help from father/guardian than other family members.
- Students attending schools on 80% and above working days were more in urban areas than rural areas.
- Achievement of rural girls was better than rural boys across the subjects.
- No difference in achievement was there in urban area.
- Performance of urban students was better than their counterparts in rural areas in EVS and Maths.
- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students in urban areas.
- By and large schooling facilities and teachers in school have not helped the children in improving their learning achievement in the three subjects.
- Active involvement of teachers in the school and attending school regularly by students help the children in improving their learning achievement in the three subjects.
- In rural areas, performance of ST students was better than SC student followed by students of Others category in all subjects.
- In urban areas, performance of students of Others category was better than SC students.
- Competency based teaching materials were more available in the 2001 than previous year.
- Free uniform and scholarship for regular attendance were provided between 29% to 30% students respectively.
- Average number of working days were about 204 in a year.
- The maximum number of in-service training programmes were organised on the theme general training and competency based teaching learning.
- Approximately 89% fathers and 68% mothers were literate.
- Percentage of girls attending 90-100% of school days was higher than boys.
- 3-4% of students score between 90-100% in EVS and Language.
- Pupil attendance, teaching-learning process, teaching aids, teaching style and physical and ancillary facilities in schools were positively associated with the achievement of students.
- PTR, age and detention of students were negatively associated with the achievement of students in all the three subjects.
- Educational status and occupation of parents were also positively associated with the achievement of students.

INTRODUCTION

Goa, the smallest state in the Union of India, came into existence on 30th May, 1987 as the 25th state. It is comprised of two districts i.e., North Goa and South Goa. Though the state was liberated in 1961, yet it remained as UT till 1987. It has achieved a stupendous success in terms of literacy, female education and per-capita income, etc. The literacy for the state is 82.32 as per the Census, 2001 and it is 88.87% for male and 75.5% for female.



The state has claimed an ideal Pupil-Teacher ratio of 24:1 for primary, 17:1 for secondary, however, it is 31:1 for middle classes. The state has adopted the pattern of education as per the Kothari Commission recommendation. According to education system the primary stage is till Class IV, middle stage is upto Class VII, secondary is from Classes VIII to X and Classes XI and XII constitute the senior secondary stage.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

There are only two districts in Goa, and South Goa was selected for the study. A total 44 schools were sampled from South Goa. Out of total sampled schools, 31 schools were from rural areas and remaining 11 schools from urban areas.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./Aided School		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	33	33	100	0	0	0	0
Urban	11	11	100	0	0	0	0
Total	44	44	100	0	0	0	0

Teachers

A total of 130 teachers were sampled from 44 sampled schools. Out of 130 teachers, 37 were male teachers and 93 were female teachers. Areawise, 98 teachers were from rural areas and 32 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	0	0	0	0	6	19.35	25	80.65	31
	Female	0	0	2	2.99	5	7.46	60	89.55	67
	Total	0	0	2	2.04	11	11.22	85	86.73	98
Urban	Male	0	0	0	0	3	50	3	50	6
	Female	0	0	0	0	2	7.69	24	92.31	26
	Total	0	0	0	0	5	15.63	27	84.38	32
Total	Male	0	0	0	0	9	24.32	28	75.68	37
	Female	0	0	2	2.15	7	7.53	84	90.32	93
	Total	0	0	2	1.54	16	12.31	112	86.15	130

Table 2 shows that the percentage of male teachers was higher than female teachers in case of OBC. However, the percentage of female teachers was higher than male teachers in case of Others categories only. Further, no SC teacher figured in the sample.

Students

A total number of 1,231 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
South Goa	Rural	470	456	926
	Urban	180	125	305
	Total	650	581	1231
Total	Rural	470	456	926
	Urban	180	125	305
	Total	650	581	1231

Out of 1,231 students, 926 students were from rural areas and remaining 305 students were from urban areas. Out of the total sample, 650 were boys and 581 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre-primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	6	18.18	0	0	0	0	32	96.97	1	3.03
Urban	10	90.91	0	0	0	0	11	100	0	0
Total	16	36.36	0	0	0	0	43	97.73	1	2.27

Out of 33 rural sampled schools, 96.97% is secondary and 3.03% is senior secondary. Further, almost 98% sampled schools were secondary schools and only 2% schools were Sr. Secondary Schools.

Facilities related to teaching-learning process

It was observed that maps, globes, charts, game equipments, reference books, dictionaries, encyclopedia, magazines, journals and newspapers and children's books were available in more than 93% schools. Play material and toys and maths kit were available in 66% to 68% schools. Besides, primary science kit and mini tool kit were available in 32% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs and, tables for teachers, water pitcher, ladel and glasses, chalk and duster, dustbin, pin-up-board/notice board, play ground, for students were available in 93% and 98% schools. However, musical instruments and play ground were available in 80% to 84% schools.

Ancillary Facilities

TV and immunization facilities were available in only 50% and 57% schools respectively. Separate toilet for girls and annual check-up for children facilities were available in 80% schools. Besides, electric connection, computers, first-aid kit, safe drinking water and toilet facilities were available in more than 90% schools.

Competency based Teaching Materials

Information gathered shows that in out of 44 schools, competency based teaching aids were available in more schools than textbooks, workbooks and teachers' handbook. Teachers' handbook were available in lesser number of schools as compared with remaining. However, textbooks and workbooks were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	14	18	30	28	138	100	796	1120	978	1266
	%	1.43	1.42	3.07	2.21	14.11	7.90	81.39	88.47	100	100
Free uniform	N	6	6	11	7	88	75	96	92	201	180
	%	2.99	3.33	5.47	3.89	43.78	41.67	47.76	51.11	100	100
Free textbooks	N	2	2	0	0	3	0	0	0	5	2
	%	40.00	100	0	0	60.00	0	0	0	100	100
Scholarship for regular attendance	N	5	4	0	0	327	308	38	44	370	356
	%	1.35	1.12	0	0	88.38	86.52	10.27	12.36	100	100
Other Schemes	N	6	2	0	0	114	82	235	179	355	263
	%	1.69	0.76	1.41	0	32.11	31.18	66.20	68.06	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meals, 81.39% boys and 88.47% girls from Others categories are more benefited. However, free uniforms were more available for both boys and girls from OBC and Other categories. And scholarship for regular attendance was provided only for OBC categories to both boys and girls and other schemes were available to only Other categories.

Instructional Time

Average number of working days in schools was 215 days, 8 periods and 36 minutes duration a class in a day

Educational Committees

The data given in the Table 6 reveals that out of total 33 rural schools, 2(6%) schools were having Village Education Committees (VEC). Parent Teacher Association (PTA) was in all rural schools but in 91% in urban schools. School Management Committees (SMC) were found more in urban schools than rural schools in terms of percentage.

Table 6 : Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	2	0	2
	%	6.06	0	4.55
AEC	N	0	0	0
	%	0	0	0
SMC	N	15	10	25
	%	45.45	90.91	56.82
PTA	N	33	10	43
	%	100	90.91	97.73

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	33	75	34.4	143	65.6	218	7	26
Urban	11	24	23.08	80	76.92	104	9	37
Total	44	99	30.75	223	69.25	322	7	29

Table 7 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas was approximately 7 and 9. Further, average pupil teacher ratio was 29:1. However, this ratio was 37:1 approximately in urban schools and 26:1 in rural area.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. The order was reverse for teachers holding graduation degree. Further, percentage of female teachers who studied upto Sr. secondary level was higher than their counterparts. However, female teachers having Class X certificate were more than male teachers. But no teacher had qualification below Class X level.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	5	13.51	5	13.51	20	54.05	7	18.92	37
Female	0	0	25	26.88	12	12.9	37	39.78	19	20.43	93
Total	0	0	30	23.08	17	13.08	57	43.85	26	20	130

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied Mathematics, Science, Language and Social Sciences.

Table 9 : The Level upto which various subjects studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	0	0	27	72.97	8	21.62	2	5.41	37
	Female	0	0	77	82.8	13	13.98	3	3.23	93
	Total	0	0	104	80	21	16.15	5	3.85	130
Science	Male	0	0	27	72.97	5	13.51	5	13.51	37
	Female	0	0	78	83.87	3	3.23	12	12.9	93
	Total	0	0	105	80.77	8	6.15	17	13.08	130
Language	Male	0	0	10	27.03	15	40.54	12	32.43	37
	Female	0	0	29	31.18	27	29.03	37	39.78	93
	Total	0	0	39	30	42	32.31	49	37.69	130
Social Science	Male	0	0	23	62.16	2	5.41	12	32.43	37
	Female	0	0	58	62.37	14	15.05	21	22.58	93
	Total	0	0	81	62.31	16	12.31	33	25.38	130

The data reveals that in Mathematics, Science and Social Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. However, this was reverse in Language. Similarly, the percentage of male teachers who studied Mathematics, Science and Language upto senior secondary level was more than female teachers. The percentage of female teachers who studied mathematics, science language and social science up to secondary level was more than their counter parts. Besides, there was not a single teacher who studied these subjects below Class X.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
44	Male	19	14	0
	Female	52	36	0
	Total	71	50	0

The majority of teacher were diploma/certificate in Primary/Elementary Education holders and remaining teachers were B.Ed degree holder. However, not a single teacher was M.Ed. degree holder. The percentage of B.Ed degree holder, male teachers were more than female teachers.

Availability of Teaching Aids

The information regarding various type of teaching aids available to teachers in both rural and urban schools was collected. The teaching aids were available more to male teachers than in urban schools to female teachers. All teaching aids such as teachers' guide, dictionary, maps, globe, charts, science kit, mathematics kit were more available to female teachers teaching in urban schools as compared to rural schools.

In-service Training

The account of in-service training programmes attended by teachers during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers trained
1. School Complex	N	50
	%	38.46
2. Block Resource Centre	N	2
	%	1.54
3. Teacher Resource Centre	N	2
	%	1.54
4. Cluster Resource Centre	N	7
	%	5.38
5. DIET	N	24
	%	18.46
6. SCERT	N	11
	%	8.46
7. Others	N	55
	%	42.31

The in-service training programme were organised in the various institutions in the districts during last three years, and teachers from both rural and urban areas attended the same. Maximum teachers attended the programme conducted by DIET and SCERT.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	47
2. Content Enrichment	31
3. Production of Instructional Material	2
4. Use of Instructional Material	5
5. Assessment of Pupil Learning	13
6. Competency based Teaching Learning	25
7. Activity based Joyful Learning	13
8. Others	30

Out of total 130 teachers 30(23%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was nearly same. The same was also true for urban areas teachers. However, percentage of female teachers in rural schools who had not attended training programme was more than their counterparts in the respective areas.

During in-service training programmes number of themes were covered. Maximum programmes were conducted on 'General Training' and it was followed by 'Content Enrichment'. Minimum programmes were conducted on 'Production of Instructional Material'.

The Effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	15	10	22	9
	%	15	10	22	9
Average	N	83	89	77	82
	%	83	89	77	82
Low	N	2	1	1	9
	%	2	1	1	9

It is evident that approximately 83% training programmes were averagely effective in terms of utility of knowledge gained during training programmes. Only 15% programmes were considered as 'Highly' useful. However, impact of these training programmes was rated as average by 77% to 89% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 9% to 22% teachers in different subject.

Academic Assistance received from various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from Head of the School and it was followed by 'Other teachers of the School'. Teachers were also getting assistance more 'sometimes' from DIET faculty within rural and urban areas.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for about 97% students in the schools was different than the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	55	4.46	21	1.70
1. Illiterate	194	15.76	419	34.03
2. Literate	57	4.63	73	05.93
3. Primary	303	24.61	234	19.00
4. Secondary	376	30.54	303	24.61
5. Sr. Secondary	88	7.15	81	6.58
6. Degree and above	81	6.58	39	3.17
7. Donot Know/Cannot say	77	6.25	61	4.95

Table 14 indicates that approximately 16% fathers and 34% mothers of the students were illiterate. Only 7% fathers and 3% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Only, 7% parents were educated upto Sr. Secondary level. Educational level of mother was poorer than father.

Occupation of Parents

Information regarding occupation of father, mother and guardian of the students has been presented in Table 15.

Table 15: Occupation of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	75	19	94	17	7	24
Household/ Housewife	27	0	27	619	229	848
Farmer	155	3	158	54	1	55
Poultry farming	7	1	8	1	0	1
Agricultural labour	63	0	63	56	0	56
Picking forest produce	20	0	20	7	0	7
Domestic Servent	12	8	20	43	18	61
Street Vender	12	4	16	7	1	8
Manual unskilled worker	140	35	175	64	5	69
Skilled worker	195	74	269	14	5	19
Clerical worker	22	16	38	6	11	17
Shopkeeper	29	19	48	2	3	5
Employer	73	58	131	12	1	13
Manager/Senior Officer	35	42	77	8	13	21
Others	61	26	87	16	11	27

Majority of mothers were housewives. Number of fathers as Manager/Senior Officers was more than mothers in both rural areas and urban areas. Fathers' occupation in decreasing order was skilled worker, manual unskilled worker, farmer, employer, others, manager/senior officer and agricultural labour. Mothers occupation in decreasing order was household/housewives, manual unskilled worker, domestic, servant, agricultural labour, farmer, others and so on.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they received has been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	100	99	78	57	178	156
	%	21.28	21.71	43.33	45.6	27.38	26.85
Mother	N	98	99	88	68	186	167
	%	20.85	21.71	48.89	54.4	28.62	28.74
Elder Brother/Sister	N	197	195	63	44	260	239
	%	41.91	42.76	35	35.2	40	41.14
Others	N	37	35	15	11	52	46
	%	7.87	7.68	8.33	8.8	8	7.92

Overall students were getting more help from elder brothers and sisters. This was true in rural areas as well. However, urban students were getting more academic assistance from mothers than anybody else. The academic assistance provided by the family members in decreasing order was elder brother, mother, father and others.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was reverse for urban areas. However, the percentage of boys attending school between 80-90% on working days was more than girls in rural areas. In urban areas, all girls were attending schools at least 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Goa. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

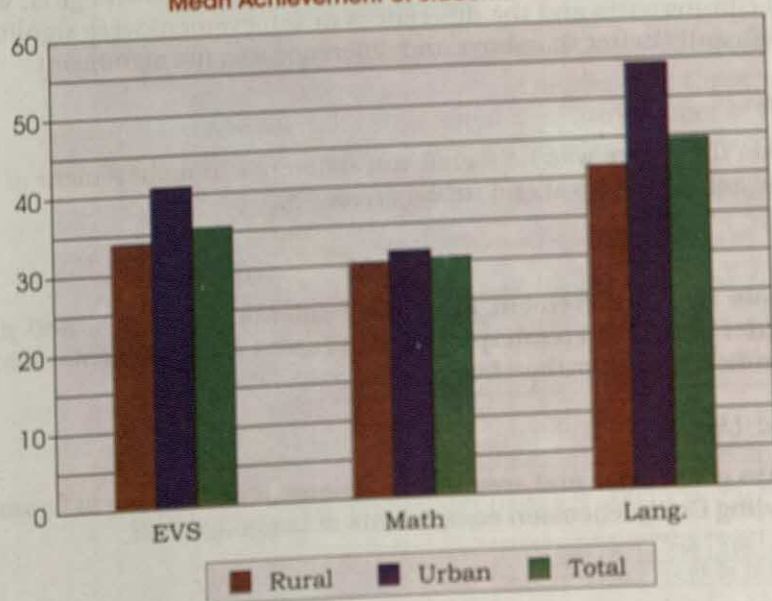
Genderwise and Areawise Achievement

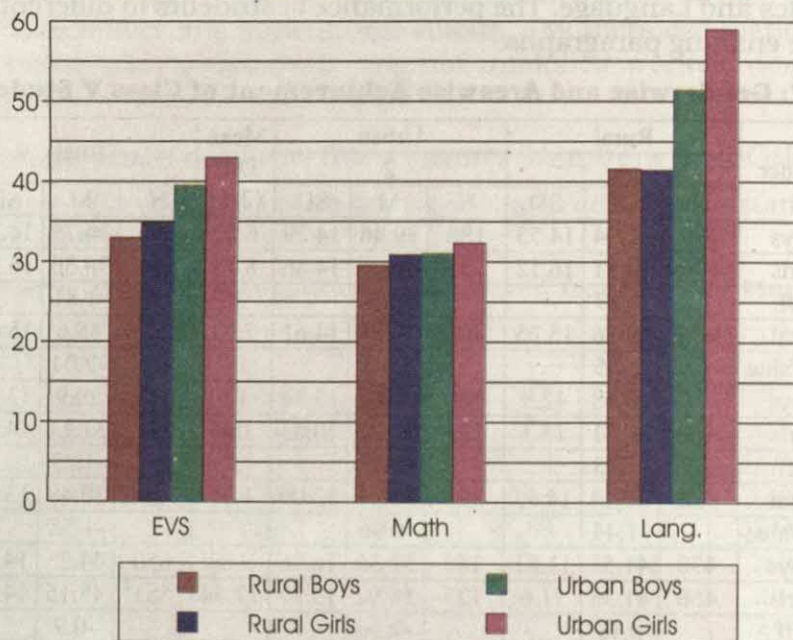
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Table 17: Genderwise and Area-wise Achievement of Students												
Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	470	32.94	14.53	180	39.46	14.29	6.52	650	34.75	14.75	5.18
	Girls	456	34.81	16.12	125	42.96	14.86	8.15	581	36.56	16.19	5.33
	Diff.		-1.87			-3.5				-1.81		
	Total	926	33.86	15.35	305	40.89	14.61	7.03	1231	35.6	15.47	7.2
	CR Value		-1.85			-2.05				-2.04		
Mathematics	Boys	470	29.48	12.9	180	30.98	13.34	1.5	650	29.9	13.03	1.29
	Girls	456	30.81	15.1	125	32.27	10.03	1.46	581	31.13	14.17	1.28
	Diff.		-1.33			-1.29				-1.23		
	Total	926	30.14	14.03	305	31.51	12.09	1.37	1231	30.48	13.59	1.65
	CR Value		-1.44			-0.96				-1.58		
Language	Boys	470	41.53	11.81	180	51.36	16.96	9.83	650	44.25	14.12	7.14
	Girls	456	41.38	11.6	125	58.92	15.77	17.54	581	45.15	14.52	11.6
	Diff.		0.15			-7.56				-0.9		
	Total	926	41.46	11.7	305	54.46	16.87	13	1231	44.68	14.31	12.5
	CR Value		0.19			-3.99				-1.1		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that performance of urban students both boys and girls, was better than the rural counterparts and the differences in achievement were significant. The girls were significantly better than boys and difference was not significant.

Mathematics

The data reveals that there was no significant difference in achievement of students genderwise and across the rural and urban areas.

Language

The data reveals that achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In urban areas, achievement of girls was significantly better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	470	42.94	13.05	180	54.87	18.54	11.93	650	46.24	15.7	7.91
	Girls	456	43.04	13	125	62.94	17.61	19.9	581	47.33	16.31	11.78
	Diff.		-0.1			-8.07				-1.09		
	Total	926	42.99	13.02	305	58.18	18.57	15.19	1231	46.75	15.99	13.25
	CR Value		-0.12			-3.85				-1.19		
Compre- hension	Boys	470	39.19	16.03	180	45.52	18.59	6.33	650	40.94	17	4.03
	Girls	456	38.61	16.19	125	52.21	16.67	13.6	581	41.54	17.21	8.13
	Diff.		0.58			-6.69				-0.6		
	Total	926	38.91	16.1	305	48.26	18.1	9.35	1231	41.22	17.1	8.04
	CR Value		0.55			-3.29				-0.61		

As in Language in Grammar and Usage the achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. In urban areas, achievement of girls was significantly better than boys.

Reading Comprehension

The achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In urban areas, the performance of girls was significantly better than boys.

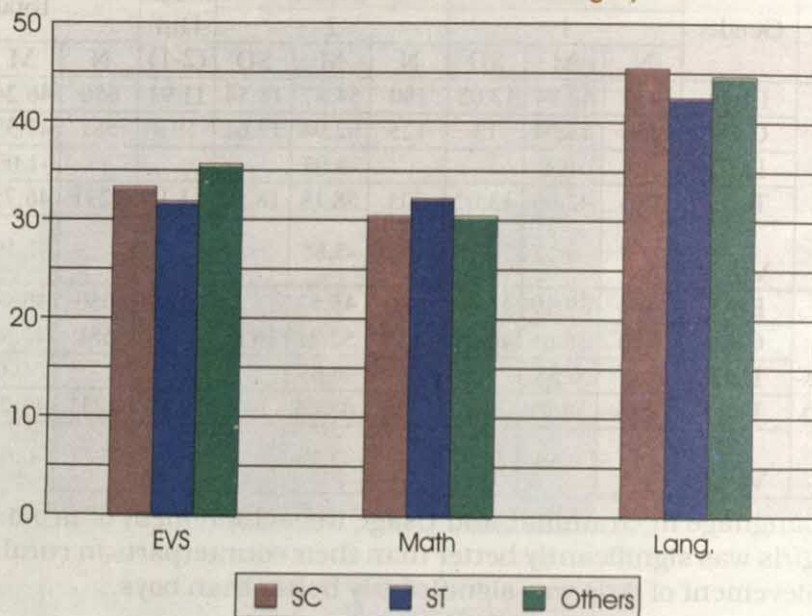
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs. It is to be noted that the number of SC and ST students in the sample was too small to make any categorywise comparisons.

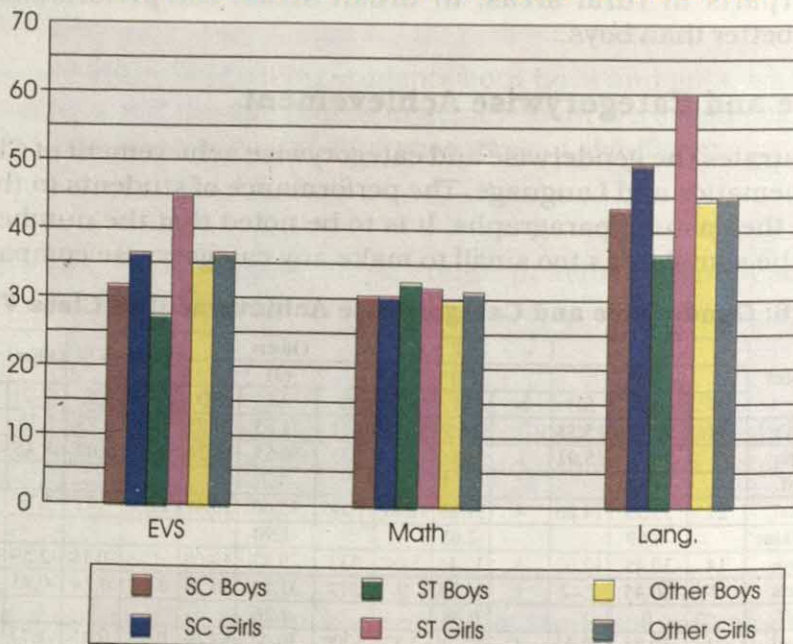
Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Boys	14	31.79	15.58	3	27.5	11.46	633	34.85	14.75	3.06	0.73	7.35	1.11	-4.29	-0.55
	Girls	7	36.43	13.91	1	45	0	573	36.55	16.24	0.12	0.02	-8.45	-12.46	8.57	1.63
	Diff.		-4.64			-17.5			-1.7							
	Total	21	33.33	14.86	4	31.88	12.81	1206	35.66	15.49	2.33	0.71	3.78	0.59	-1.45	-0.2
	CR Value		-0.69			-2.65			-1.90							
Mathe- matics	Boys	14	30.45	12.02	3	32.46	3.04	633	29.87	13.09	-0.58	-0.18	-2.59	-1.41	2.01	0.55
	Girls	7	30.45	7.42	1	31.58	0	573	31.13	14.25	0.68	0.24	-0.45	-0.76	1.13	0.4
	Diff.		0			0.88			-1.26							
	Total	21	30.45	10.51	4	32.24	2.52	1206	30.47	13.66	0.02	0.01	-1.77	-1.34	1.79	0.68
	CR Value		0.00			0.50			-1.59							
Langu- age	Boys	14	43.39	15.89	3	36.67	6.29	633	44.31	14.11	0.92	0.21	7.64	2.08	-6.72	-1.2
	Girls	7	49.64	20.13	1	60	0	573	45.07	14.45	-4.57	-0.6	-14.93	-24.73	10.36	1.36
	Diff.		-6.25			-23.33			-0.76							
	Total	21	45.48	17.17	4	42.5	12.75	1206	44.67	14.27	-0.81	-0.21	2.17	0.34	-2.98	-0.4
	CR Value		-0.72			-6.42			-0.92							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data revealed that there was no significant difference in achievement between boys and girls of SC and Others categories.

Mathematics

The data revealed that as in EVS, there was no significant difference in achievement between boys and girls of SC and Others categories.

Language

The data revealed that there was no significant difference in achievement of boys and girls of SC and Others categories.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Sub-ject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	14	47.71	18.06	3	42.67	10.07	633	46.22	15.69	-1.49	-0.31	3.55	0.61	-5.04	-0.67
	Girls	7	52	24.98	1	68	0	573	47.23	16.19	-4.77	-0.5	-20.77	-30.71	16	1.69
	Diff.		-4.29			-25.33			-1.01							
	Total	21	49.14	20.09	4	49	15.1	1206	46.7	15.93	-2.44	-0.55	-2.3	-0.3	-0.14	-0.02
	CR Value		-0.41			-4.36			-1.10							
Reading Comprehension	Boys	14	36.19	16.27	3	26.67	0	633	41.12	17.03	4.93	1.12	14.45	21.35	-9.52	-2.19
	Girls	7	45.71	15.6	1	46.67	0	573	41.48	17.25	-4.23	-0.71	-5.19	-7.2	0.96	0.16
	Diff.		-9.52			-20			-0.36							
	Total	21	39.36	16.32	4	31.67	10	1206	41.29	17.13	1.93	0.54	9.62	1.91	-7.69	-1.25
	CR Value		-1.30			00.00			-0.36							

The data reveals that in Others and SC categories there was no significant difference in achievement between boys and girls.

Reading Comprehension

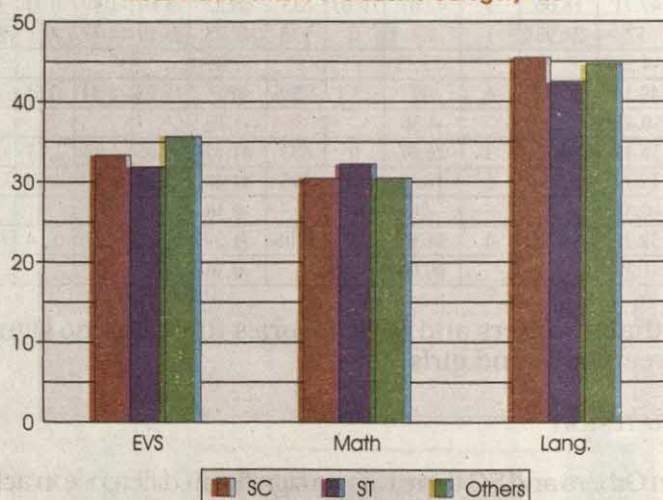
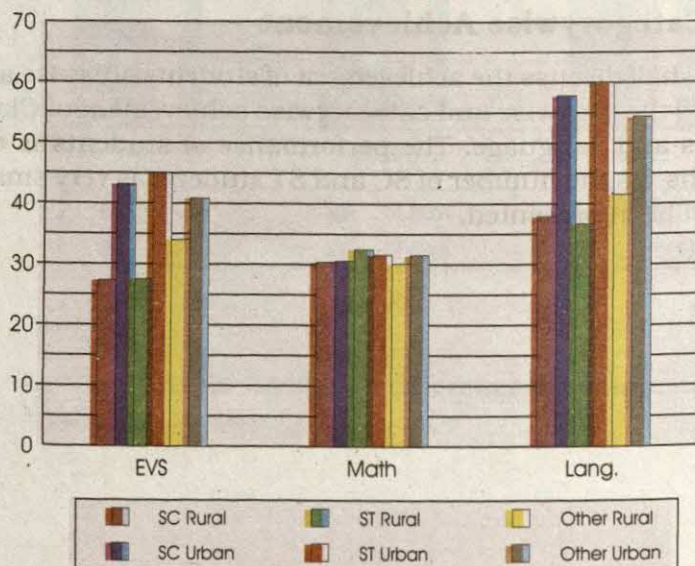
The data reveals that in Others and SC there was no significant difference in achievement between boys and girls. The performance in Reading Comprehension was poorer than Grammar and Usage.

Areawise and Categorywise Achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs. As the number of SC and ST students is very small, category wise differences has not been presented.

Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	13	27.31	9.21	3	27.5	11.46	910	33.98	15.42	6.67	2.56	6.48	0.98	0.19	0.03
	Urban	8	43.12	17.56	1	45	0	296	40.82	14.57	-2.3	-0.37	-4.18	-4.94	1.88	0.3
	Diff.		-15.81			-17.5			-6.84							
	Total	21	33.33	14.86	4	31.88	12.81	1206	35.66	15.49	2.33	0.71	3.78	0.59	-1.45	-0.2
	CR Value		-3.00			-2.65			-6.91							
Mathe- matics	Rural	13	30.37	7.57	3	32.46	3.04	910	30.13	14.13	-0.24	-0.11	-2.33	-1.28	2.09	0.76
	Urban	8	30.59	14.75	1	31.58	0	296	31.53	12.06	0.94	0.18	-0.05	-0.07	0.99	0.19
	Diff.		-0.22			0.88			-1.4							
	Total	21	30.45	10.51	4	32.24	2.52	1206	30.47	13.66	0.02	0.01	-1.77	-1.34	1.79	0.68
	CR Value		-0.04			0.50			-1.66							
Langu- age	Rural	13	37.88	11.67	3	36.67	6.29	910	41.52	11.71	3.64	1.12	4.85	1.33	-1.21	-0.25
	Urban	8	57.81	18.1	1	60	0	296	54.35	16.89	-3.46	-0.53	-5.65	-5.76	2.19	0.34
	Diff.		-19.93			-23.33			-12.83							
	Total	21	45.48	17.17	4	42.5	12.75	1206	44.67	14.27	-0.81	-0.21	2.17	0.34	-2.98	-0.4
	CR Value		-2.78			-6.42			-12.15							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Areawise**

Environmental Studies

The data reveals that the performance of urban students was better than rural students in each category and the differences in achievement were significant.

Mathematics

The data reveals that in each category, there was no significant difference in achievement between rural and urban students.

Language

The data reveals that achievement of urban students was better than rural students in each category and differences in achievement were significant.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Rural	13	41.23	15.09	3	42.67	10.07	910	43.02	13.01	1.79	0.43	0.35	0.06	1.44	0.2
	Urban	8	62	21.38	1	68	0	296	58.04	18.54	-3.96	-0.52	-9.96	-9.24	6	0.79
	Diff.		-20.77			-25.33			-15.02							
	Total	21	49.14	20.09	4	49	15.1	1206	46.7	15.93	-2.44	-0.55	-2.3	-0.3	-0.14	-0.02
	CR Value		-2.40			-4.35			-12.94							
Reading Comprehension	Rural	13	32.31	12.43	3	26.67	0	910	39.04	16.15	6.73	1.93	12.37	23.11	-5.64	-1.64
	Urban	8	50.83	15.91	1	46.67	0	296	48.2	18.21	-2.63	-0.46	1.53	1.45	-4.16	-0.74
	Diff.		-18.52			-20			-9.16							
	Total	21	39.36	16.32	4	31.67	10	1206	41.29	17.13	1.93	0.54	9.62	1.91	-7.69	-1.25
	CR Value		-2.81			00.00			-7.72							

The data reveals that in each category, the achievement of urban students was better than rural students and differences in achievement were significant.

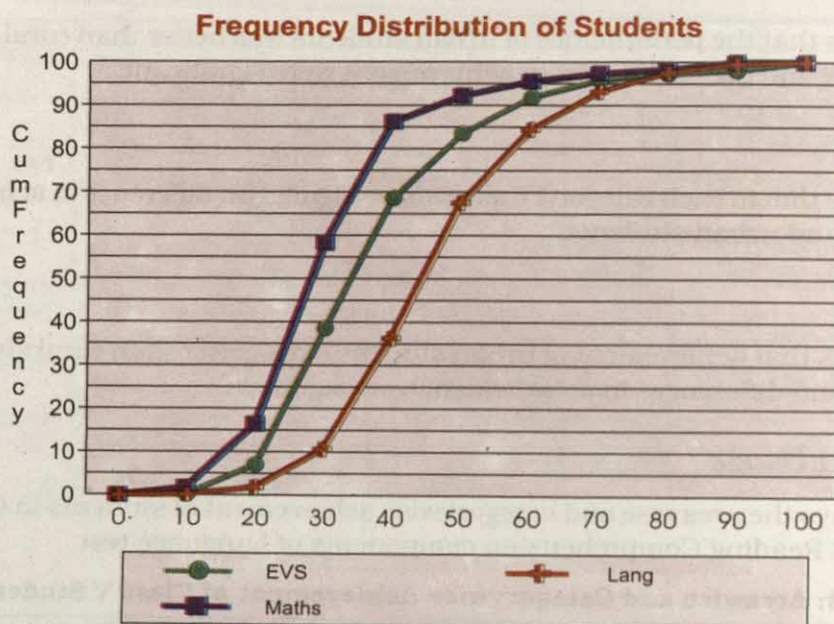
Reading Comprehension

The data reveals that performance of urban students of SC and Others was significantly better than their counterparts in rural areas.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their Achievement level

Subject	Achievement Level									
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	3	84	388	370	183	103	49	18	24
	cf	3	87	475	845	1028	1131	1180	1207	1231
	cf(%)	0.24	7.07	38.59	68.64	83.51	91.88	95.86	97.32	100
Math	f	22	181	515	344	74	41	22	11	0
	cf	22	203	718	1062	1136	1177	1199	1210	1231
	cf(%)	1.79	16.49	58.33	86.27	92.28	95.61	97.40	98.29	100
Language	f	2	20	109	316	384	208	108	54	5
	cf	2	22	131	447	831	1039	1147	1201	1231
	cf(%)	0.16	1.79	10.64	36.31	67.51	84.40	93.18	97.56	100



The figures posted in Table 23 revealed that in EVS and Language, the distribution of scores covered the entire range from 0 – 100 percent. In Mathematics, none of the students could score in the range 90-100 percent. The maximum number of cases in EVS (388), in Mathematics (515) and in language (384) were in the range 20-30 percent, 20-30 percent and 40-50 percent respectively.

CLASSIFICATION OF TEST ITEMS

Test items are distributed according to Facility Values (FV) and Discrimination Indices (DI) below.

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	5	3	12
25 to less than 50	Difficult	30	23	22
50 to less than 75	Average	5	13	4
75 to 100	Very Easy	0	1	0

A large number of items appear difficult in all subjects. Relatively more very difficult items are in Mathematics as compared to other subjects. Most of these items were on the use of decimal and fractions. The overall performance is fairly normal.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	26	26	19
Less than .30	Poor Discrimination	14	14	19

No item in any subject was found to have a high discrimination value.

A fairly number of items were poorly discriminating in all subjects. In Mathematics 50% items were poorly discriminating. Most of them were on decimals, fractions or geometrical configuration which were found difficult. In EVS these items were about freedom fighter, leaders and local environment. In language most of these items were from comprehension passages.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.72	0.79
2	Mathematics	38	0.63	0.74
3	Language	40	0.67	0.74

IMPACT OF INTERVENING VARIABLES

School Related Variables

Availability of competency-based teaching learning material and physical facilities in the school influence the learning achievement of children. The positive association of availability of competency-based teaching learning material with EVS indicates that it has helped the children in improving their learning achievement in EVS. Physical facilities of the school help the children in improving their scores in the three subjects.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	29.922	-	46.730	--	38.701	--
PTR	-0.061	-0.107	-0.107	-0.037	-0.016	-0.000
Com Participation	0.023	0.004	0.030	0.014	0.026	0.209
Teach-aid	0.101	0.023	0.730	0.015	0.211	0.167
Physical facility	0.383	0.016	0.499	0.030	0.431	0.026
Ancillary facility	0.094	0.014	0.968	0.060	0.241	0.074
Instructional time	0.106	0.081	0.011	0.070	0.043	0.021
Working day	0.013	0.154	0.118	0.125	0.095	0.119
Index-Comp. TLM	0.427	0.020	0.099	0.060	-0.070	-0.291
R²	0.011		0.095		0.0209	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 1.1% of total variance in EVS, 9.5% in Mathematics and 2.1% in Language.

Teacher Related Variables

Help from senior officers of school organisation influences the learning achievement of children in EVS and Mathematics and to some extent teaching-aids and teaching style of teachers influence learning achievement of children in the three subjects. The positive association of school organisation with the criteria indicates that active involvement of senior officers of school organization i.e., head of institution, senior teachers, cluster and block resource coordinators, BEO/DEO/AIOS and DIET faculty help the children

in improving their scores in EVS and Mathematics. Teaching aids and teacher's experience also help the children in improving their skills in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	29.566	--	20.368	--	48.228	--
Index-Qualification	0.028	0.025	0.617	0.110	1.571	0.090
Index-Experience	0.026	0.079	0.146*	0.066	0.451	0.048
Index-Teaching Aid	0.593	0.112*	1.011*	0.146**	5.032**	0.094*
Index-School Org.	0.819	0.075	0.080	0.011	0.352	0.056
R²	0.055		0.137		0.084	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 5.5% of total variance in EVS, 13.7% in Mathematics and 8.4% in Language.

Pupil Related Variables

Education and occupation of parents, schooling practices and academic assistance provided by the family members to the children influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these variables with three criterions indicates that teaching learning process adopted by teachers and academic assistance provided by the family members have helped the children in improving their learning achievement in EVS, mathematics and language. Attending school regularly has helped the children in improving their score in the three subjects.

Table 29 Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	17.371	-	17.371	-	37.246	-
Index Ed & Occu.	3690**	0.196**	3.330**	0.56*	5.922**	-
Index Schooling	0.777	0.106**	0.376	0.009	1.520*	0.219**
Index TLP	2.417	0.037	2.331	0.027	0.094	0.048
Age	-0.983	-0.044	-0.633**	-0.083**	-0.027	-0.143**
Detention	0.359**	0.129**	0.201**	-0.055	0.320**	0.199**
Attendance	0.101	0.030	0.011	0.001	0.051	0.026
R²	0.056		0.056		0.158	

The predictors explain 5.6% of total variance in EVS, 5.6% in Mathematics and 15.8% in Language.

One can infer that schooling practices and academic assistance provided by the family members to the children, and active involvement of school organisation help the children in improving their learning achievement in EVS, Mathematics and Language.

HARD SPOT OF LEARNING

In EVS, 5(12.5%) items were correctly responded to by less than 25% of students and found very difficult. Whereas, 30(75%) items were correctly responded to by less than 50% of students and recognised as difficult item. Contentwise, the hard spot in learning in EVS was identification of a state on the map, natural features of the country, climatic conditions at varying attitudes, identification of boundaries with neighbouring countries, understanding a longitude and a latitude, identification of poles, civics knowledge, knowledge about freedom movement, knowledge of solar system and planets and understanding of eclipse, knowledge of composition of air, knowledge of pollution free fuel, knowledge of soil erosion, effects of deforestation, concept of flotation, effect of force, knowledge of gravitation force, knowledge of health workers, knowledge of parts of human body, conservation of wild animals and knowledge of function of fins of a fish.

In Language, items 15, 20 and 38 were correctly responded to by less than 25% of students and found very difficult. However, 23(57.5%) items were correctly responded to by less than 50% of students and found difficult. Contentwise, the hard spots in learning of language was found in vocabulary, comprehension of story, structure, comprehension of instructions and time table, comprehension of informatical passage and comprehension of story.

In Mathematics, 12(32%) items were correctly responded to by less than 25% of students and found very difficult. Likewise, 22(58%) items were correctly responded to by less than 50% of students and found difficult. Contentwise the hard spots in learning in Mathematics was identified as division, profit and loss, triangle according to angles, time, descending and ascending order in fraction, division in fraction, word problems fraction on comparison, conversion from one unit to others, subtraction, multiplication, BODMAS, percentage, word problem on percentages, word problems on addition and multiplication. It seems in Goa in every area items found were hard spots in learning.

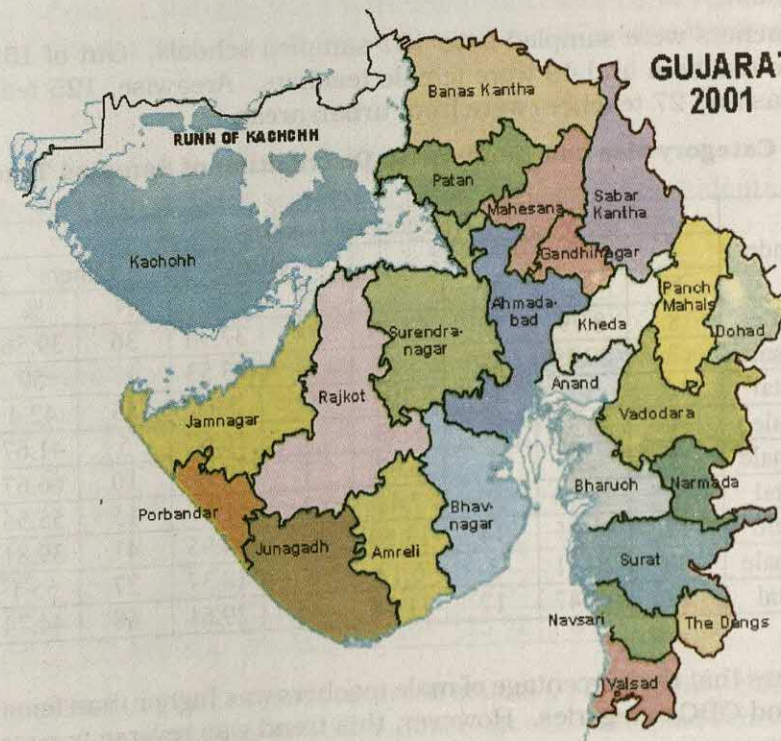
FINDINGS

- Number of female teachers was more than male in the sample.
- All sampled schools were Secondary/Sr. Secondary schools.
- Maps and globes were available in almost all schools.
- All infrastructural facilities were available in more than 79% schools.
- TV and Immunisation facility were available in 52-57% schools.
- Teaching Aids were available for primary classes since 2001 only.
- Students were getting more benefit under Mid-day meal scheme as compared to rest of the incentive schemes.
- Average number of working days in schools was approximately 215 days.
- All schools in rural areas were having Parent Teacher Association.
- Area Education Committee was not observed in any school.
- Percentage of female teachers was higher than male teachers.
- Pupil teacher ratio was higher in urban schools than rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Not a single teacher had qualification below Class X.
- Degree holder male teachers were more in mathematics, science and social science than female teachers.
- Majority of teachers were diploma/certificate in primary/elementary education holders.
- Teaching aids were available to teachers more in urban school than teachers in rural schools.
- Maximum in-service training programmes were of the kind of general training.

- Minimum in-service training programmes were conducted on 'Production of Instructional Material' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately 23% teachers have not attended any in-service training programme during last three years.
- In most of the cases teachers were getting assistance from 'Head of Schools'.
- For approximately 97 students medium of instruction in the school was different as the language spoken at home.
- Percentage of mothers having educational qualification degree or higher educational qualification was less than father.
- In general educational qualification of mothers was lower than father.
- Majority of mothers were housewives.
- Maximum number of fathers were skilled worker.
- Overall students were getting more academic assistance from elder brothers and sisters but urban students were getting more academic assistance from mothers.
- About 98% students were attending schools on more than 70% working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In rural areas, performance of ST students was better than SC student followed by students of Others category in all subjects.
- In urban areas, performance of students of Others category was better than SC students.
- Computer was available in 90% schools.
- 2% students scored between 90-100% in EVS only.
- Competency based teaching materials were more available in the 2001 then previous year.
- Free uniform and scholarship for regular attendance were provided between 8% to 11% students.
- Academic assistance provided by the family members and active involvement of school organisation help the children in improving their learning achievement in the three subjects.
- More experienced teachers and use of teaching aids contributed in the achievement of students in all the three subjects.
- Availability of competency based teaching learning material and physical facilities in the school influenced the learning achievement of children.

INTRODUCTION

The Gujarat State is comprised of 25 districts with a total population of 5,05,96,992 (as per the Census of India, 2001).



The Literacy Rate in the State is 60.03% and in case of male it is 68.82% and 50.48% in case of female. Approximately, 40,000 teachers were engaged for teaching about 10,61,855 students in Class V. The class specific pupil-teacher ratio is 37:1.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total 137 schools were sampled from Bhavanagar, Gandhi Nagar and Panch Mahal districts of Gujarat. Out of the total sampled schools, 44 schools were from Bhavanagar, 43 from Gandhi Nagar and remaining 50 from Panchmahal.

Areawise and management wise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	114	114	100	0	0	0	0
Urban	23	23	100	0	0	0	0
Total	137	137	100	0	0	0	0

Teachers

A total 152 teachers were sampled from 137 sampled schools. Out of 152 teachers, 103 were male teachers and 49 were female teachers. Areawise, 125 teachers were from rural areas and 27 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	8	8.79	13	14.29	34	37.36	36	39.56	91
	Female	7	20.59	2	5.88	8	23.53	17	50	34
	Total	15	12	15	12	42	33.6	53	42.4	125
Urban	Male	4	33.33	1	8.33	2	16.67	5	41.67	12
	Female	3	20	1	6.67	1	6.67	10	66.67	15
	Total	7	25.93	2	7.41	3	11.11	15	55.56	27
Total	Male	12	11.65	14	13.59	36	34.95	41	39.81	103
	Female	10	20.41	3	6.12	9	18.37	27	55.1	49
	Total	22	14.47	17	11.18	45	29.61	68	44.74	152

Table 2 shows that the percentage of male teachers was higher than female teachers in case of ST and OBC categories. However, this trend was reverse in case of SC and Others category.

Students

A total number of 2,453 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Bhavanagar	Rural	386	343	729
	Urban	171	102	273
	Total	557	445	1002
Gandhi Nagar	Rural	355	252	607
	Urban	141	105	246
	Total	496	357	853
Panchmahal	Rural	295	248	543
	Urban	31	24	55
	Total	326	272	598
Total	Rural	1036	843	1879
	Urban	343	231	574
	Total	1379	1074	2453

Out of 2,453 students, 1,879 students were from rural areas and remaining 574 students were from urban areas. Out of the total sample, 1,379 were boys and 1,074 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	6	5.26	32	28.07	82	71.93	0	0
Urban	1	4.35	1	4.35	22	95.65	0	0
Total	7	5.11	33	24.09	104	75.91	0	0

Table 4 indicates that out of 114 rural sampled schools, pre-primary classes were attached with only 6 schools whereas in urban areas, out of 23 sampled schools, it was attached with only 1 school. Further, 28% schools in rural areas and 4% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was 72% and 96% respectively for rural and urban areas. However, no school having secondary or Sr. Secondary classes was included in the sample.

Facilities related to teaching-learning process

It was observed that maps, globes, charts, reference books, dictionaries, encyclopedia, magazines, journals, newspapers were available in 81% to 87% schools. Children

books were available in 93% schools. Math kits was available in 41% schools. Play material, toys and games equipment were available in 59% to 61% schools. But, mini tool kit was available only in 16% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs for teachers and chalk and duster were available in 90% to 94% schools. Whereas, tables for teachers, water pitcher, ladel and glasses, musical instrument, play ground, mat and furnitures for students were available in 69% to 87% schools. However, pin-up Boards were available in only 42% schools. Further, dustbins board were available in 57% schools.

Ancillary Facilities

Separate toilet facilities for girls was available only 31% schools. Annual medical check-up for children, and immunisation facilities were available in 88% and 92% schools respectively. Besides, TV, toilet facilities and electric connection were available in 51% to 65% schools. Safe drinking water facility was available in 73% schools. However, computer and first-aid-kit were available in 4%-13% schools.

Competency based Teaching Materials

Information gathered shows that out of 137 schools, competency based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Teaching aids were available in lesser number of schools as compared with remaining. However, workbooks and teachers' handbook were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	2138	985	1184	769	8357	7239	1981	2225	13660	11218
	%	15.65	8.78	8.67	6.86	61.18	64.53	14.50	19.83	100	100
Free uniform	N	567	582	677	502	9260	7654	859	990	11363	9728
	%	4.97	5.98	5.96	5.16	81.49	78.68	7.56	10.18	100	100
Free textbooks	N	1426	1171	1031	769	11801	9904	2626	2864	16884	14708
	%	8.45	7.96	6.11	5.23	69.89	67.34	15.55	19.47	100	100
Scholarship for regular attendance	N	772	868	751	578	6579	6729	749	761	8851	8936
	%	8.72	9.71	8.48	6.47	74.33	75.30	8.46	8.52	100	100
Other Schemes	N	1	2	76	67	143	111	3	1	223	181
	%	0.45	1.10	34.08	37.02	64.13	61.33	1.35	0.55	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In

case of mid-day meal, both boys and girls from OBC category were more benefited. However, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls from OBC category.

Instructional Time

Average number of working days in schools was approximately 219 days on an average. Schools were having 7 periods in a day of approximately of 36 minutes duration.

Educational Committees

The data given in the Table 6 of reveals that out of total 114 rural schools, 80(70%) schools were having Village Education Committees (VEC). School Management Committee (SMC) was observed in 72 (63.13%) schools and Parent Teacher Association (PTA) was observed in 75 (65.79%) schools. Further, VEC, AEC, SMC and PTA were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	80	6	86
	%	70.18	26.09	62.77
AEC	N	11	2	13
	%	9.65	8.7	9.49
SMC	N	72	9	81
	%	63.16	39.13	59.12
PTA	N	75	6	81
	%	65.79	26.09	59.12

Teachers Profiles

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	114	371	54.72	307	45.28	678	6	36
Urban	23	78	35.29	143	64.71	221	10	42
Total	137	449	49.94	450	50.06	899	7	37

Table 7 shows that overall number of female teachers was equal to male teachers. The number of female teachers in schools in urban and rural area was more than male teachers. The average number of teachers per school in rural and urban areas was approximately 6 and 10 respectively. Further, average pupil teacher ratio was approximately 37:1, however, this ratio was approximately 42:1 in urban schools.

Educational Qualification

The percentage of female teachers holding degree and PG degree was more than male teachers. This trend was reverse for teacher holding secondary and sr. secondary qualification. Further, percentage of female teachers who studied below Class X level was higher than their counterparts. However, percentage of teachers having qualification below Class X was only 1.32%.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	1	0.97	58	56.31	26	25.24	13	12.62	5	4.85	103
Female	1	2.04	27	55.1	10	20.41	8	16.33	3	6.12	49
Total	2	1.32	85	55.92	36	23.68	21	13.82	8	5.26	152

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to the level up to which they had studied Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	3	2.91	89	86.41	8	7.77	3	2.91	103
	Female	2	4.08	39	79.59	6	12.24	2	4.08	49
	Total	5	3.29	128	84.21	14	9.21	5	3.29	152
Science	Male	4	3.88	89	86.41	8	7.77	2	1.94	103
	Female	3	6.12	39	79.59	3	6.12	4	8.16	49
	Total	7	4.61	128	84.21	11	7.24	6	3.95	152
Language (Medium)	Male	1	0.97	58	56.31	33	32.04	11	10.68	103
	Female	2	4.08	29	59.18	11	22.45	7	14.29	49
	Total	3	1.97	87	57.24	44	28.95	18	11.84	152
Social Science	Male	1	0.97	82	79.61	16	15.53	4	3.88	103
	Female	3	6.12	40	81.63	2	4.08	4	8.16	49
	Total	4	2.63	122	80.26	18	11.84	8	5.26	152

The data reveals that in Mathematics, Language, Science and Social Science the percentage of female teachers who studied these subjects upto degree level was more than male teachers. However, the percentage of male teachers who studied Science, Language and Science upto senior secondary level was more than female teachers. The percentage of female teachers studied Language and social science up to secondary level was more than their counterparts. Besides, the percentage of female teachers who studied Mathematics, Science, Language and Social Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
137	Male	95	6	2
	Female	45	1	1
	Total	140	7	3

The majority of teacher had diploma/certificate in primary/elementary education and seven teachers were having B.Ed. degree and only three teachers had M.Ed. degree.

Availability of Teaching Aids

Various type of teaching aids available to teachers in both rural and urban areas to 85% or more teachers. Similarly, all teaching aids were available to more than 86% and 75% female and male teachers respectively in urban schools.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: Inservice Training Programmes

Organisers who provided training		Total No. of Teachers
1. School Complex	N	1
	%	0.66
2. Block Resource Centre	N	15
	%	9.87
3. Teacher Resource Centre	N	2
	%	1.32
4. Cluster Resource Centre	N	38
	%	25.00
5. DIET	N	88
	%	57.89
6. SCERT	N	20
	%	13.16
7. Others	N	13
	%	8.55

Various training programme were organised in various institutions in the districts during last three years, and teachers from both rural and urban areas attended the same. Maximum member of teachers attended the prgoramme conducted by the DIET and TRC.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	13
2. Content Enrichment	111
3. Production of Instructional Material	15
4. Use of Instructional Material	11
5. Assessment of Pupil Learning	7
6. Competency based Teaching Learning	13
7. Activity based Joyful Learning	18
8. Others	15

Out of total 152 teachers, 18% teachers had not attended any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 17% and 10% respectively. However, percentage of male teachers in rural schools was more than their counterpart.

During in-service training programmes, number of themes were covered. Maximum in-service training programmes were conducted on 'Competency based Teaching-Learning by 'Content Enrichment'. Minimum programmes were conducted on 'Use of Instructional Material'.

The Effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	52	44	55	52
	%	41.60	35.2	44	41.6
Average	N	70	80	69	72
	%	56	64	55.2	57.6
Low	N	3	1	1	1
	%	2.4	.8	.8	0.8

It is evident that approximately 56% training programmes had average effectiveness in terms of utility of knowledge gained during programmes. Approximately, 42% programmes were considered as 'highly' useful. However, impact of these training programmes on improvement in teaching skills was rated as average by 55% to 64% teachers in different subjects. The improvement in teaching-skills in all subjects due to these training programmes was rated 'high' by 35% to 44% teachers.

Academic Assistance received from various Sources

It was observed that teachers both in rural and urban areas were getting maximum assistance from Head of the School and it was followed by 'Other teachers of the School'. Sometimes, they were also getting assistance from Other sources.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 97% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	82	3.34	66	2.69
1. Illiterate	507	20.67	1252	51.04
2. Literate	195	07.95	193	07.87
3. Primary	783	31.92	556	22.67
4. Secondary	494	20.14	202	08.23
5. Sr. Secondary	185	07.54	61	02.49
6. Degree and above	64	02.60	12	00.49
7. Do not Know/ Cannot say	143	05.83	111	04.53

Table 14 indicates that approximately 21% fathers and 51% mothers of the students were illiterate. Only approximately 3% fathers and 0.49% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents had education either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	74	28	102	88	20	108
Household/ Housewife	11	4	15	1203	400	1603
Farmer	723	54	777	251	12	263
Poultry farming	17	5	22	3	3	6
Agricultural labour	234	16	250	144	10	154
Picking forest produce	11	4	15	2	1	3
Domestic Servent	14	5	19	3	18	21
Street Vender	23	14	37	8	3	11
Manual unskilled worker	208	124	332	137	51	188
Skilled worker	212	82	294	14	6	20
Clerical worker	14	48	62	1	6	7
Shopkeeper	84	27	111	1	1	2
Employer	19	2	21	0	0	0
Manager/Senior Officer	76	56	132	7	21	28
Others	159	105	264	17	22	39

In rural areas approximately two third mothers were housewives and one third fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and maximum fathers were manual unskilled workers. Only few mothers and 132 fathers were Manager/Senior Officers. Number of fathers who are Manager/Senior Officers were more in rural areas whereas it was more for mothers in urban areas. Fathers' occupation in decreasing order was farmer, manual unskilled worker, skilled worker, agricultural labour, manager/senior officer, shopkeeper, etc. Mothers' occupation in decreasing order was household/housewives, farmer, manual unskilled worker, agricultural labour, Manager/senior officer, domestic servant, skilled worker, etc. However, not a single mother was employer.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	414	359	125	81	539	440
	%	39.96	42.59	36.44	35.06	39.09	40.97
Mother	N	203	135	55	55	258	190
	%	19.59	16.01	16.03	23.81	18.71	17.69
Elder Brother/Sister	N	323	267	106	75	429	342
	%	31.18	31.67	30.9	32.47	31.11	31.84
Others	N	68	41	27	19	95	60
	%	6.56	4.86	7.87	8.23	6.89	5.59

Both girls and boys in rural, urban as well as overall were getting maximum help from father/guardian than any other. However, in rural areas more girls than boys were getting more academic assistance from father. However, the trend was reverse in urban areas in term of percentage. The descending order of academic assistance provided by the family members was fathers, elder brothers and sisters and mothers.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 60-80% of working days was nearly same. Only 4% percent boys and girls were attending schools less than 60% of total working days. Approximately 79% students were attending schools more than 70% of working days. Besides, percentage of girls attending school between 80-90% of the total working days was more than boys.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests

administered during the achievement survey conducted in the year 2002 in Gujarat. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

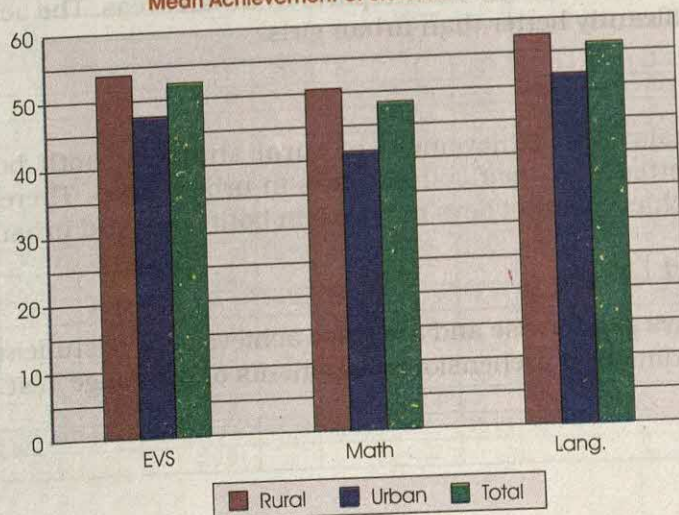
Genderwise and Areawise Achievement

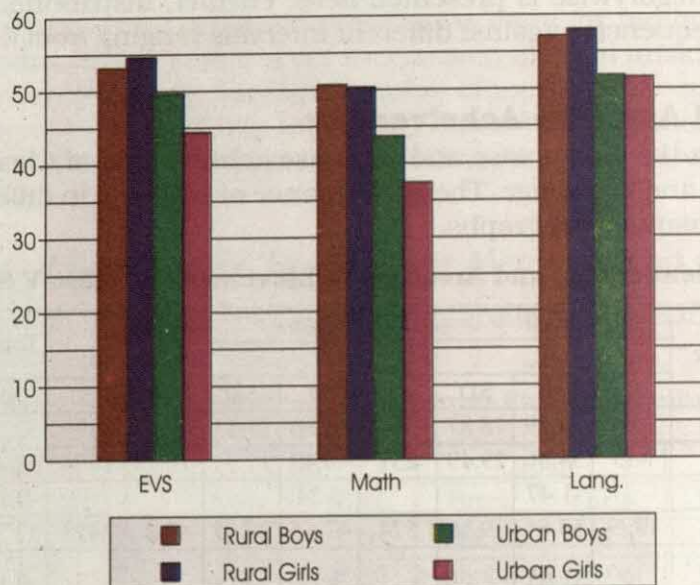
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1036	53.19	18.87	343	49.66	21.13	-3.53	1379	52.32	19.51	-2.75
	Girls	843	54.66	19.49	231	44.42	17.91	-10.24	1074	52.45	19.61	-7.55
	Diff.		-1.47			5.24				-0.13		
	Total	1879	53.85	19.16	574	47.55	20.05	-6.3	2453	52.38	19.55	-6.66
	CR Value		-1.65			3.19				-0.16		
Mathe - matics	Boys	1036	50.7	18.25	343	43.71	19.86	-6.99	1379	48.96	18.9	-5.76
	Girls	843	50.35	19.42	231	37.43	15.46	-12.92	1074	47.57	19.37	-10.61
	Diff.		0.35			6.28				1.39		
	Total	1879	50.55	18.78	574	41.18	18.46	-9.37	2453	48.36	19.12	-10.6
	CR Value		0.4			4.25				1.78		
Langu - age	Boys	1036	57.18	17.27	343	51.79	17.99	-5.39	1379	55.84	17.6	-4.86
	Girls	843	58.01	18.18	231	51.54	19.7	-6.47	1074	56.62	18.7	-4.49
	Diff.		-0.83			0.25				-0.78		
	Total	1879	57.55	17.69	574	51.69	18.68	-5.86	2453	56.18	18.09	-6.66
	CR Value		-1.01			0.15				-1.05		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that there was no significant difference in achievement between boys and girls in rural areas. The achievement of rural students, both boys and girls, was significantly better than their counterparts in urban areas. Within the groups, both boys and girls from rural area were significantly better than their urban counterparts.

Mathematics

The data reveals that performance of rural students, both boys and girls, was significantly better than their counterparts in urban areas. The achievement of urban boys was significantly better than urban girls.

Language

The data reveals that achievement of rural students, both boys and girls, was significantly better than their counterparts in urban areas. There was no significant difference in achievement of boys and girls in both rural and urban areas.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram - mar & Usage	Boys	1036	59.16	18.01	343	52.79	19.2	-6.37	1379	57.58	18.51	-5.41
	Girls	843	59.95	18.6	231	53.71	20.8	-6.24	1074	58.61	19.25	-4.13
	Diff.		-0.79			-0.92				-1.03		
	Total	1879	59.51	18.27	574	53.16	19.85	-6.35	2453	58.03	18.84	-6.83
	CR Value		-0.93			-0.54				-1.34		
Compre- hension	Boys	1036	53.88	21.76	343	50.11	21.25	-3.77	1379	52.94	21.69	-2.83
	Girls	843	54.79	22.93	231	47.91	22.77	-6.88	1074	53.31	23.06	-4.06
	Diff.		-0.91			2.2				-0.37		
	Total	1879	54.29	22.29	574	49.22	21.88	-5.07	2453	53.1	22.29	-4.84
	CR Value		-0.88			1.17				-0.4		

The data reveals that achievement of rural students, both boys and girls, was significantly better than their counterparts in urban areas. There was no significant difference in achievement of boys and girls in both rural and urban areas.

Reading Comprehension

As in Grammar and Usage, in Reading Comprehension also, the pattern of achievement was exactly same.

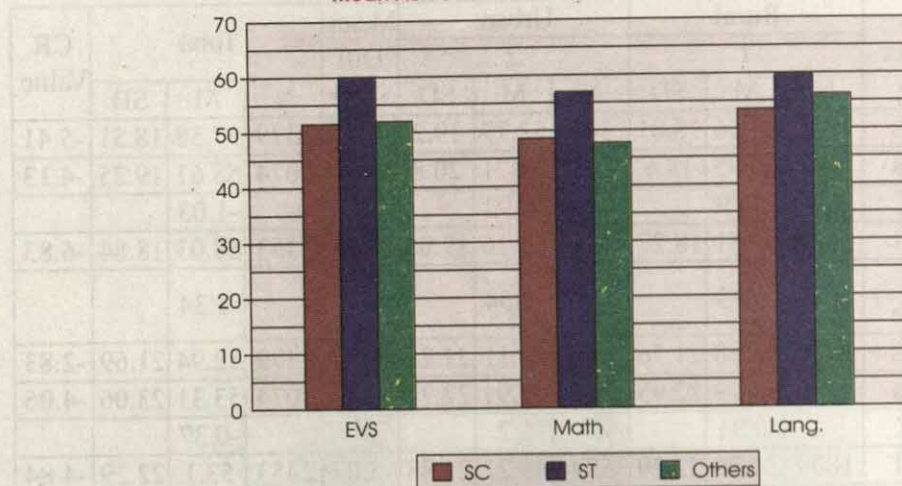
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

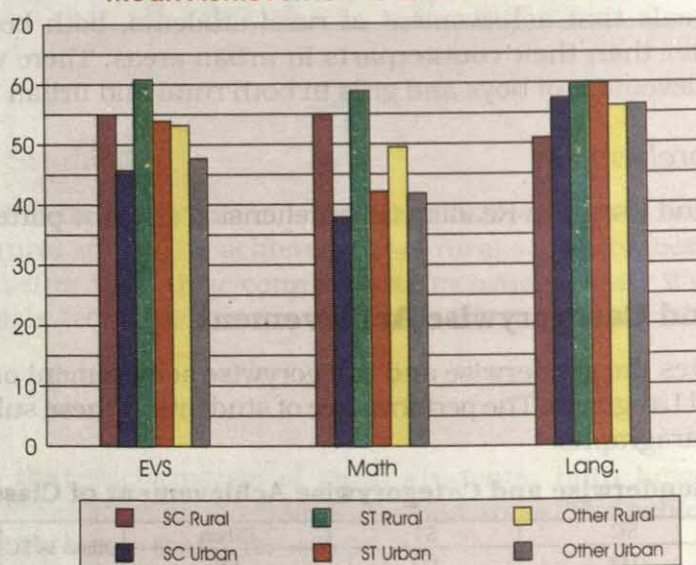
Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
EVS	Boys	141	50.92	19.58	84	62.05	17.96	1154	51.78	19.43	0.86	0.49	-10.27	-5.03	11.13	4.35
	Girls	93	52.53	20.75	60	57.17	21.89	921	52.14	19.32	-0.39	-0.17	-5.03	-1.74	4.64	1.31
	Diff.		-1.61			4.88			-0.36							
	Total	234	51.56	20.02	144	60.02	19.77	2075	51.94	19.38	0.38	0.28	-8.08	-4.75	8.46	4.02
	CR Value		-0.59			1.42			-0.42							
Mathe- matics	Boys	141	47.07	22.13	84	55.48	18.09	1154	48.72	18.44	1.65	0.85	-6.76	-3.3	8.41	3.1
	Girls	93	50.93	20.6	60	58.95	18.98	921	46.49	19.01	-4.44	-1.99	-12.46	-4.93	8.02	2.47
	Diff.		-3.86			-3.47			2.23							
	Total	234	48.61	21.57	144	56.93	18.48	2075	47.73	18.73	-0.88	-0.6	-9.2	-5.77	8.32	3.98
	CR Value		-1.36			-1.10			2.69							
Langu- age	Boys	141	50.9	19.36	84	59.85	14.9	1154	56.15	17.45	5.25	3.07	-3.7	-2.17	8.95	3.89
	Girls	93	57.45	19.51	60	59.83	16.19	921	56.33	18.76	-1.12	-0.53	-3.5	-1.61	2.38	0.82
	Diff.		-6.55			0.02			-0.18							
	Total	234	53.5	19.64	144	59.84	15.39	2075	56.23	18.04	2.73	2.03	-3.61	-2.69	6.34	3.49
	CR Value		-2.52			0.01			-0.22							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that performance of ST students, both boys and girls was better than their counterparts in SC and Others. The difference in achievement of boys and total students was significantly better between Others vs ST and ST vs SC.

Mathematics

The data reveals that the performance of ST students both boys and girls was better than students of SC and Others. The differences in achievement were significant between Others vs ST and ST vs SC. In Others category the achievement of boys was significantly better than girls.

Language

The data reveals that there was no significant difference in achievement of girls across the categories. The achievement of ST boys and total students was better than students of Others category followed by SC category and the differences in achievement were significant across the categories. The performance of SC girls was significantly better than SC boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	141	53.05	20.64	84	63.1	15.68	1154	57.73	18.31	4.68	2.57	-5.37	-2.99	10.05	4.12
	Girls	93	57.89	19.47	60	62.8	16.06	921	58.41	19.41	0.52	0.25	-4.39	-2.02	4.91	1.7
	Diff.		-4.84			0.3			-0.68							
	Total	234	54.97	20.28	144	62.97	15.78	2075	58.03	18.8	3.06	2.2	-4.94	-3.58	8	4.28
	CR Value		-1.82			0.11			-0.81							
Reading Comprehension	Boys	141	47.33	22.26	84	54.44	20.48	1154	53.52	21.62	6.19	3.13	-0.92	-0.4	7.11	2.44
	Girls	93	56.7	24.84	60	54.89	21.2	921	52.86	22.98	-3.84	-1.43	-2.03	-0.71	-1.81	-0.48
	Diff.		-9.37			-0.45			0.66							
	Total	234	51.05	23.72	144	54.63	20.71	2075	53.23	22.23	2.18	1.34	-1.4	-0.78	3.58	1.54
	CR Value		-2.94			-0.13			0.67							

The data reveals that performance of ST students, both boys and girls, was better than Others followed by SC students. In case of boys, the differences in achievement were significant across the categories. The performance of girls and total students was significant between Others vs ST. There was no significant difference between boys and girls within categories.

Reading Comprehension

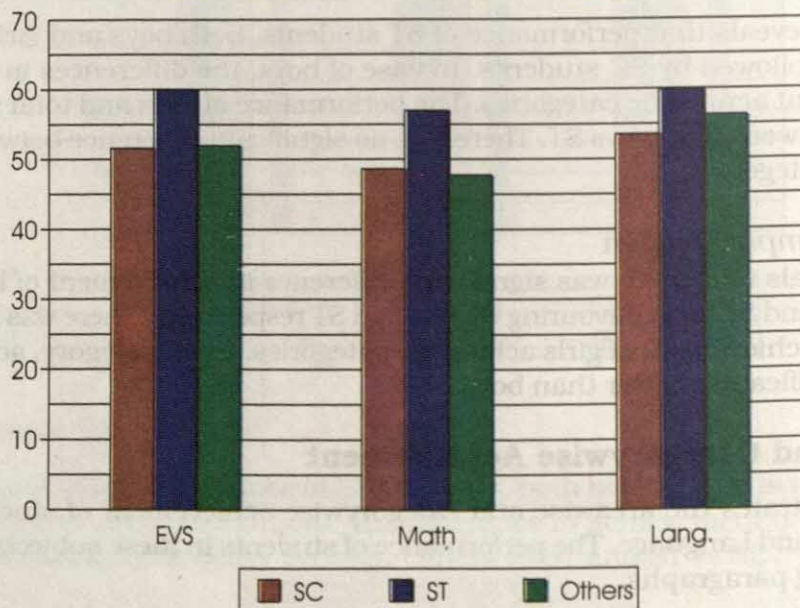
The data reveals that there was significant difference in achievement of boys between Others vs SC and ST vs SC favouring Others and ST respectively. There was no significant difference in achievement of girls across the categories. In SC category, achievement of girls was significantly better than boys.

Areawise and Categorywise Achievement

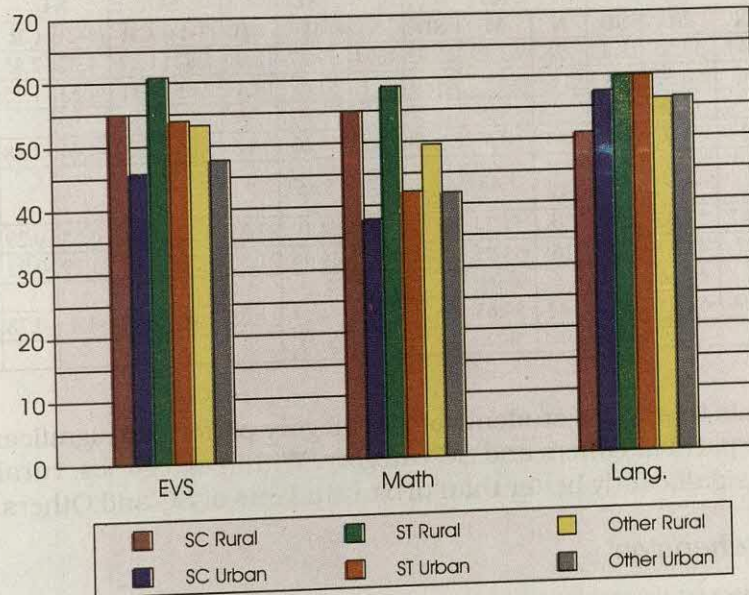
Table 21 illustrates the areawise and categorywise achievement of students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 21 Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	147	55.02	20.07	128	60.78	19.87	1604	53.19	18.91	-1.83	-1.06	-7.59	-4.17	5.76	2.39
	Urban	87	45.72	18.64	16	53.91	18.33	471	47.67	20.34	1.95	0.88	-6.24	-1.33	8.19	1.64
	Diff.		9.3			6.87			5.52							
	Total	234	51.56	20.02	144	60.02	19.77	2075	51.94	19.38	0.38	0.28	-8.08	-4.75	8.46	4.02
	CR Value		3.58			1.40			5.26							
Mathematics	Rural	147	54.98	19.87	128	58.78	17.25	1604	49.48	18.58	-5.5	-3.23	-9.3	-5.84	3.8	1.7
	Urban	87	37.84	20.1	16	42.1	21.72	471	41.77	18	3.93	1.7	-0.33	-0.06	4.26	0.73
	Diff.		17.14			16.68			7.71							
	Total	234	48.61	21.57	144	56.93	18.48	2075	47.73	18.73	-0.88	-0.6	-9.2	-5.77	8.32	3.98
	CR Value		6.33			2.96			8.11							
Language	Rural	141	50.9	19.36	84	59.85	14.9	1154	56.15	17.45	5.25	3.07	-3.7	-2.17	8.95	3.89
	Urban	93	57.45	19.51	60	59.83	16.19	921	56.33	18.76	-1.12	-0.53	-3.5	-1.61	2.38	0.82
	Diff.		-6.55			0.02			-0.18							
	Total	234	53.5	19.64	144	59.84	15.39	2075	56.23	18.04	2.73	2.03	-3.61	-2.69	6.34	3.49
	CR Value		-2.52			0.01			-0.22							

Mean Achievement of Students-Categorywise

Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas differences in achievement were significant between Others vs ST and ST vs SC favouring ST students in both cases. Within categories, the achievement of rural students was significantly better than urban students in case of SC and Others.

Mathematics

The data reveals that in rural areas, achievement of ST was better than SC followed by Others and the differences in achievement were significant between Others vs SC and Others vs ST. Within categories, achievement of rural students was better than urban students in each category.

Language

The data reveals that the achievement of rural students of ST category was significantly better than Others. Within categories, achievement of rural students was significantly better than urban students in SC and Others category.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Rural	147	57.55	18.49	128	63.59	15.93	1604	59.37	18.39	1.82	1.14	-4.22	-2.85	6.04	2.91
	Urban	87	50.62	22.43	16	58	14.01	471	53.47	19.49	2.85	1.11	-4.53	-1.25	7.38	1.74
	Diff.		6.93			5.59			5.9							
	Total	234	54.97	20.28	144	62.97	15.78	2075	58.03	18.8	3.06	2.2	-4.94	-3.58	8	4.28
	CR Value		2.43			1.48			5.85							
Reading Comprehension	Rural	147	55.01	23.01	128	54.74	20.77	1604	54.19	22.35	-0.82	-0.41	-0.55	-0.29	-0.27	-0.1
	Urban	87	44.37	23.51	16	53.75	20.87	471	49.96	21.52	5.59	2.06	-3.79	-0.71	9.38	1.62
	Diff.		10.64			0.99			4.23							
	Total	234	51.05	23.72	144	54.63	20.71	2075	53.23	22.23	2.18	1.34	-1.4	-0.78	3.58	1.54
			3.37			0.18			3.72							

The data reveals that rural students of ST category performed significantly better than their counterparts in Others and SC category. Within categories, rural students' achievement was significantly better than urban students of SC and Others.

Reading Comprehension

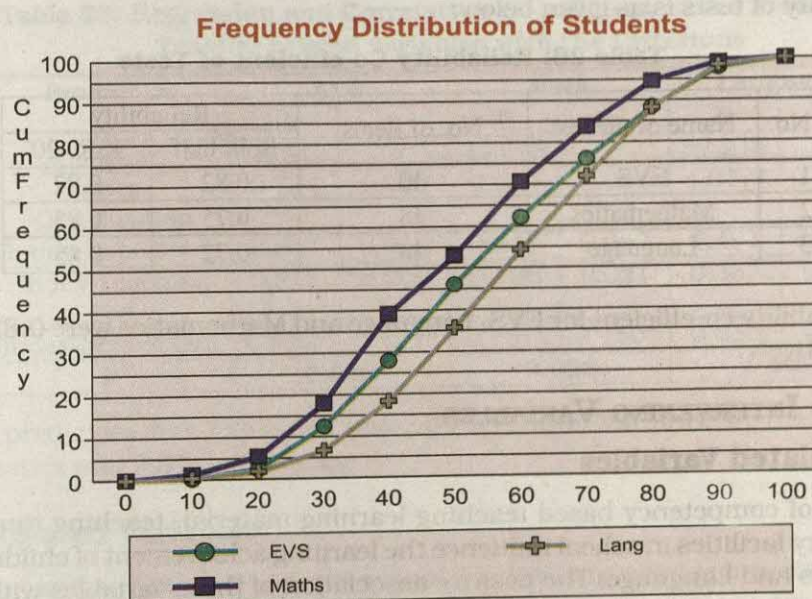
The data reveals that in urban areas, the difference in achievement was significant between Others vs SC favouring Others. In SC and Others categories, achievement of rural students was significantly better than urban students.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	4	55	246	381	444	394	348	298	228	55
	cf	4	59	305	686	1130	1524	1872	2170	2398	2453
	cf(%)	0.16	2.41	12.43	27.97	46.07	62.13	76.13	88.46	97.76	100
Math	f	29	105	306	521	338	435	325	262	109	23
	cf	29	134	440	961	1299	1734	2059	2321	2430	2453
	cf(%)	1.18	5.46	17.94	39.18	52.96	70.69	83.94	94.62	99.06	100
Language	f	8	37	119	286	426	457	431	401	248	40
	cf	8	45	164	450	876	1333	1764	2165	2413	2453
	cf(%)	0.33	1.83	6.69	18.34	35.71	54.34	71.91	88.26	98.37	100

The figures posted in Table 23 revealed that in all the three subjects, the distribution of scores covered the entire range from 0-100 percent. The minimum number of cases in EVS (4), in Mathematics (23) and in Language (8) were in the range 0-10 per cent, 90-100 per cent and 0-10 per cent respectively. The maximum number of cases in EVS (444), in Mathematics (521) and in Language (457) were in the range 40-50 per cent, and 30-40 per cent and 50-60 per cent respectively. The 53.93% students in EVS, 47.04% in Mathematics and 64.29% in Language scored more than 50% marks. Whereas, 11.54% in EVS, 5.38%, in Mathematics and 11.74% in Language scored more than 80% marks.



CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	1	0
25 to less than 50	Difficult	13	12	21
50 to less than 75	Average	26	23	16
75 to 100	Very Easy	0	4	1

Most of the items appeared to be of average difficulty and difficult. In Mathematics difficult areas were fractions, decimal system and conversion of units.

Location of the place, civics and atmosphere were the difficult areas in the subject EVS. In Language, sentence correction and comprehension were identified as difficult areas.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
1.00 to .70	Good Discrimination	1	0	2
.30 to less than .70	Average Discrimination	33	36	31
Less than .30	Poor Discrimination	6	4	5

Most of the items were discriminating adequately.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.82	0.87
2	Mathematics	38	0.75	0.85
3	Language	40	0.72	0.85

The reliability co-efficient for EVS, Language and Mathematics were 0.82, 0.72 and 0.75 respectively.

IMPACT OF INTERVENING VARIABLES

School Related Variables

Availability of competency based teaching learning material, teaching time, physical and ancillary facilities in school influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these variables with the three criterions indicates that availability of competency-based handbook has helped the children in improving their learning skills in the three subjects EVS, Mathematics and Language. Competency-based teaching learning material has also helped the children in improving their scores in three subjects and active participation of community through various committees has helped the children in Mathematics.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	61.033	-	35.174	-	66.031	-
PTR	-0.406**	-0.300*	-0.296*	-0.251**	-0.365**	-0.232**
Com_Participation	0.523	0.185	1.641*	0.275**	0.382	0.107
Tech-aid	0.518	0.086	0.886	0.126	1.373*	0.139*
Physical facility	0.412	0.086	0.032*	0.043	0.849*	0.048
Ancillary facility	0.796	0.096	0.861*	0.095	2.222*	0.168*
Instructional time	0.961*	0.112*	0.048	0.085	0.069*	0.123*
Working day	0.059	0.031	0.051	0.142	0.063	0.002
Index-Comp. TLM	0.040**	0.334**	5.661**	0.328**	4.210*	0.202*
R²	0.219		0.176		0.189	

The predictors explain 21.9% of total variance in EVS, 17.6% in Mathematics and 18.9% in Language.

Teacher Related Variables

Teaching experience and teacher's training, teacher's qualification and use of teaching aids and teaching style help the children in improving their learning achievement in the three subjects i.e., EVS, Mathematics and Language. However, active involvement of senior colleagues of the school organisation in the teaching processes has helped the children in improving their scores in EVS and mathematics.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	44.512	--	44.998	--	57.215	--
Index-Qualification	0.734	0.009	0.030	0.007	4.017*	0.136**
Index-Experience	0.817	0.040	0.241	0.050	0.491	0.002
Index-Teaching Aid	0.815	0.009	0.196	0.021	0.337	0.041
Index-School Org.	0.952*	0.171*	0.751*	0.150*	0.236	0.018
R²	0.036		0.028		0.023	

The predictors has explained only 3.6% of total variance in the EVS, 2.8% in mathematics and 2.3% in language.

Pupil Related Variables

Education and accaption of parents, school practices and academic assistance provided by the family members to the children, teaching-learning processes adopted by teachers in school and percentage attendance of students in school influence the learning achievement of children in EVS, mathematics and language. The positive association of these variables with the criteria indicates that attending school regularly by children, active involvement of parents at home and teachers in school help the children in improving their learning skills in the three subjects EVS, Mathematics and Language. Children in higher age group perform poorly.

Table 29 Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	32.906	-	21.236	-	33.321	-
Index-Ed & Occ.	0.526	0.041	0.258*	0.056*	0.626	0.031*
Index-Schooling	1.966**	0.069**	2.658	0.068**	1.232**	0.059
Index-TLP	1.286*	0.050*	1.513**	0.091**	1.021*	0.050*
Age	-0.816*	-0.024	-1.744*	-0.053**	-0.716**	-0.023
Detention	-0.196	-0.009	-0.861	-0.009	-0.096**	-0.008
Attendance	0.138**	0.091**	0.208**	0.098**	0.121**	0.060**
R²	0.015		0.039		0.021	

The predictors explain 1.5% of total variance in EVS, 3.9% in Mathematics and 2.1% in Language.

One can infer from above analysis that active involvement of teachers in school and parents at home, attending school regularly and availability of teacher's training material like competency-based teacher's handbook helps the children in improving the learning achievement of students in the three subjects EVS, Mathematics and Language. Involvement of school organisation and participation of community has helped the children to some extent in EVS and Mathematics respectively.

COMPARISON OF ACHIEVEMENT BETWEEN DPEP vs NON-DPEP DISTRICTS

In Gujarat out of 3 districts, Gandhi Nagar is the only non-DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise Achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	883	51.7	19.97	496	53.42	18.62	1.6
	Girls	717	53.49	20.25	357	50.36	18.12	-2.56
	Diff.		-1.79			3.06		
	Total	1600	52.5	20.11	853	52.14	18.46	-0.45
	CR Value		-1.77			2.41		
Mathe- matics	Boys	883	49.86	18.76	496	47.37	19.06	-2.34
	Girls	717	49.75	19.51	357	43.21	18.35	-5.39
	Diff.		0.11			4.16		
	Total	1600	49.81	19.09	853	45.63	18.87	-5.2
	CR Value		0.11			3.21		
Language	Boys	883	55.98	16.56	496	55.58	19.34	-0.39
	Girls	717	55.85	18.09	357	58.17	19.81	1.86
	Diff.		0.13			-2.59		
	Total	1600	55.92	17.25	853	56.66	19.56	0.93
	CR Value		0.15			-1.9		

The data reveals that in Mathematics the achievement of students of DPEP districts was significantly better than students of non-DPEP districts. In EVS and Language, there was no significant difference in achievement of total students. In EVS, the achievement of girls of DPEP districts was significantly better than girls of non-DPEP districts.

HARD SPOTS OF LEARNING

In EVS, only item No. 40 was identified as a very difficult item as only less than 25% students were able to correctly responded to the items. But, 13(32.5%) items were correctly responded to by less than 50% of the students and found difficult. Contentwise, the hard spots in learning EVS was found in knowledge or carrier of diseases, identification of natural features of the country, identification of boundaries with neighbouring countries, understanding a longitude and a latitude, representative of a President in a state, judicial functions of courts, recognition of first president of India, farmer, role in freedom struggle, knowledge of composition of air, effect of weather conditions on human bodies, knowledge of pollution free fuel, knowledge of parts of human body and knowledge of carrier of diseases.

In Language only item No. 16 was found very difficult as less than 25% of students were able to correctly responded to the item, whereas, 12(30%) items were correctly responded to by less than 50% of students and found difficult. Contentwise the hard spots in learning language was identified in structure, comprehension of instructions, comprehension of time table, informatical passage and comprehension of story.

In Mathematics, no item was found very difficult. However, 21(55%) items were correctly responded to by less than 50% of students and found difficult. Contentwise the hard spots in learning Mathematics was identified in LCM, commercial Mathematics, decimals (subtraction, multiplication, conversion from percent to fraction) rounding of numbers and area of square.

FINDINGS

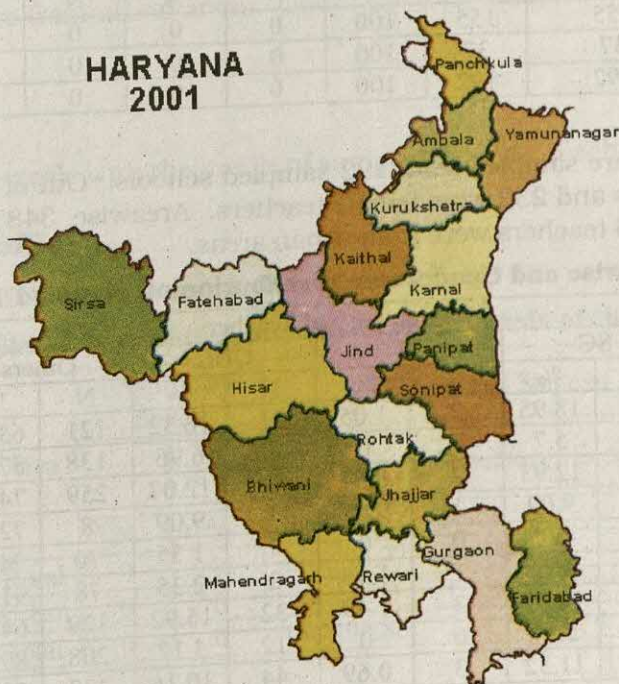
- Pin up boards were available in 42% schools.
- Teaching Aids and competency based learning material were available for primary classes in more schools in 2001 as compared with previous years.
- Students were getting more benefit under Free Uniform incentive scheme as compared to remaining incentive schemes in the state.
- Average number of working days in schools was approximately 219 days.
- Approximately 66% schools in rural areas were having Village Education Committees.
- SMC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Percentage of female teachers was higher than male teachers in schools.
- Average number of teachers in urban schools was higher than in rural schools.
- Pupil-teacher ratio was higher in urban schools than rural schools.
- Percentage of degree and PG degree holder female teachers was more than male teachers.
- Degree holder male teachers were more in Mathematics, Science Language and Social Science than female teachers.
- 90% teachers were diploma/certificate in primary/elementary education holders.
- All teaching aids were available to 75% or more teachers both in rural and urban areas.
- In general, teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET on 'Content Enrichment'.
- Minimum in-service training programmes were conducted on 'Assessment of Pupil Learning' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by approximately half the teachers.
- Approximately 18% teachers have not attended any in-service training programme during last three years.
- In most of the cases teachers were getting maximum assistance from 'Head of Schools'.
- For approximately 97% students, medium of instruction in the school was same as the language spoken at home.
- Percentage of mothers having educational qualification degree or higher educational qualification was less than fathers.
- Maximum mothers were housewives and in rural areas fathers were farmers.
- No mother was an employer.
- Students were getting more academic assistance from fathers/guardians than other family members.
- Girls were getting more academic assistance from father than boys in rural areas.
- More than 66% students were attending schools on above 70 per cent of total working days.
- Approximately 4 per cent students were attending schools below 60 per cent of the total working days.
- The performance of ST students was significantly better than students of others and SC categories in all three subjects.
- The performance of rural students was significantly better than urban students in all three subjects.
- In all the three subjects 1 to 2% of the students scored between 90 to 100%.
- Availability of competency based handbook in school helps the children in improving their learning achievement in the three subjects.
- By and large teaching experience and teachers' training, teachers' qualification and use of teaching aids by teachers did not help the children in improving their learning achievement in the three subjects.

- Active involvement of teachers in school and parents at home and attending school regularly helped the children in improving their learning achievement in the three subjects.
- Higher PTR negatively affected learning achievement in all the three subjects.
- In Mathematics the achievement of students of DPEP districts was significantly better than students of non DPEP districts.

INTRODUCTION

There has been sporadic expansion in school education in Haryana since 1966. Despite the fact that the State Education Department has been making incessant and strenuous efforts to improve the access to and quality of school education, the state has still a long distance to cover to achieve the goal of universalisation of primary education and improving quality of education being imparted at all level.

Haryana has free and compulsory primary education. Primary schooling facilities are available to almost all school going children of age group 6-11. There is a primary school within a kilometer of every child's walking distance. There are 19 districts in the State.



The number of primary schools has increased from 4,447 (1966-67) to 11,208 (2001-02). With the increase of number of primary schools, number of students and teachers has also increased. The number of students has increased from 8.59 lakhs (1970-71) to 19.7 lakhs (2001-02) and number of teachers has increased from 13,078 (1970-71) to 50,295 (2001-02). The percentage enrolment of girls has increased from 28.9% (1970-71) to 47.1% (2001-02). The pupil teacher ratio in the state is 30:1 at primary stage.

The no-detention policy is in vogue at the primary stage upto Class II and the heads of school complexes conduct public examination for Class V. At all levels of school education, three terminal tests, half yearly and annual examination are given.

At the time of its inception, the state literacy rate 19.92% (Census, 1961) was lower than the national average 27.76% (Census, 1961). The figures of 2001 Census reveal that literacy rate (68.59%) is above the national average (65.38%).

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total 192 schools were sampled from Hissar, Kaithal, Panchkula and Rohtak districts of Haryana. The districtwise break up of schools is 44 schools were from Hissar, 50 from Kaithal, 49 each from Panchkula and Rohtak.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided School		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	155	155	100	0	0	0	0
Urban	37	37	100	0	0	0	0
Total	192	192	100	0	0	0	0

Teachers

A total 433 teachers were sampled from 192 sampled schools. Out of 433 teachers, 201 were male teachers and 232 were female teachers. Areawise, 348 teachers were from rural areas and 85 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	36	18.95	2	1.05	31	16.32	121	63.68	190
	Female	9	5.7	0	0	11	6.96	138	87.34	158
	Total	45	12.93	2	0.57	42	12.07	259	74.43	348
Urban	Male	1	9.09	1	9.09	1	9.09	8	72.73	11
	Female	3	4.05	0	0	1	1.35	70	94.59	74
	Total	4	4.71	1	1.18	2	2.35	78	91.76	85
Total	Male	37	18.41	3	1.49	32	15.92	129	64.18	201
	Female	12	5.17	0	0	12	5.17	208	89.66	232
	Total	49	11.32	3	0.69	44	10.16	337	77.83	433

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except Others. However, not a single ST female teacher figured in the sample.

Students

A total number of 4,604 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Hissar	Rural	618	326	944
	Urban	120	136	256
	Total	738	462	1200
Kaithal	Rural	557	473	1030
	Urban	85	102	187
	Total	642	575	1217
Panchkula	Rural	377	337	714
	Urban	93	76	169
	Total	470	413	883
Rohtak	Rural	449	615	1064
	Urban	108	132	240
	Total	557	747	1304
Total	Rural	2001	1751	3752
	Urban	406	446	852
	Total	2407	2197	4604

Out of 4,604 students, 3,752 students were from rural areas and remaining 852 students were from urban areas. Out of the total sample, 2,407 were boys and 2,197 were girls.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre-primary classes		Terminal Stage of School							
	N	%	Primary		Elementary		Secondary		Sr Secondary	
			N	%	N	%	N	%	N	%
Rural	0	0	150	96.77	1	0.65	4	2.58	0	0
Urban	0	0	36	97.3	1	2.7	0	0	0	0
Total	0	0	186	96.88	2	1.04	4	2.08	0	0

Table 4 indicates that out of 155 rural sampled schools, approximately 97% schools were only primary schools. The percentage of elementary schools in the sampled schools was approximately 0.65% and 2.7% respectively for rural and urban areas. The percentage of secondary schools in the sampled school was 2.58 in rural area. However, no school having Senior secondary classes was included in the sample.

Facilities related to teaching-learning process

It was observed that maps and charts were available in almost all sampled schools. Magazines, journals and newspapers were available only in 26% schools. Reference books, dictionaries, encyclopedias and mini tool kits were available in 58% schools. Play materials and toys and primary science kits were available in 70% to 74% schools respectively. Besides, children books were available in 94% schools. Globes were available in 83% schools.

Infrastructural facilities

It was observed that blackboard, chalk and duster and chairs for teachers were available in 93 to 94% schools. Whereas, tables for teachers and school bells were available in 76% schools. Water pitcher, ladel and glasses, were available in 89% schools. Besides, play ground was available in 67% schools. However, musical instruments were available in only 17% schools. Further, pin-up boards/notice boards were available in 30% schools. But, dustbins were available in 66% schools.

Ancillary Facilities

Computer and TV facilities were available only in 1% schools. Annual medical check-up for children, immunisation facilities and toilet facilities were available in 73%, 79% and 71% schools respectively. Besides, separate toilet facilities for girls were available in only 55% schools. However, safe drinking water facility was available in 84% schools. Electric connection is available in 27% schools.

Competency based Teaching Materials

Information gathered shows that, out of 192 schools, competency based textbooks (71%) and teaching aids (61.5%) were available in more schools than workbooks (30.7%) and teachers' handbook (45.3%).

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	7387	7069	178	136	4827	4840	7156	7731	19548	19776
	%	37.79	35.75	0.91	0.69	24.69	24.47	36.61	39.09	100	100
Free uniform	N	1210	4892	0	3	27	613	0	670	1237	6178
	%	97.82	79.18	0	0.05	1.86	9.92	0	10.84	100	100
Free textbooks	N	4762	4530	26	13	2985	2618	3492	2781	11265	9942
	%	42.27	45.56	0.23	0.13	26.50	26.33	31.00	26.97	100	100
Scholarship for regular attendance	N	1266	4629	317	3	70	47	223	454	1876	5133
	%	67.48	90.18	16.90	0.06	3.73	0.92	11.89	8.84	100	100
Other Schemes	N	1741	1562	0	64	351	355	216	254	2308	2235
	%	75.43	69.89	0	2.86	15.21	15.88	9.36	11.36	100	100

Various schemes like mid-day meals, free uniforms, free textbooks and scholarships for regular attendance were available to both boys and girls across the categories. In case of mid-day meals and free textbooks both boys and girls from SC and OBC categories were more benefited. However, free uniform and scholarship for regular attendance were more available for boys and girls from SC categories.

Instructional Time

Average number of working days in schools was approximately 219 days. Schools were having 7 periods in a day of 41 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 155 rural schools, 140(70.18%) schools were having Village Education Committees (VEC). Parent Teacher Association, Area Education Committees and School-Management Committees were found more in rural schools than urban schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	140	18	158
	%	70.18	26.09	62.77
AEC	N	20	14	34
	%	9.65	8.7	9.49
SMC	N	48	6	54
	%	63.16	39.13	59.12
PTA	N	149	31	180
	%	65.79	26.09	59.12

Teachers Profile

In this section, teachers profile in the sampled schools has been discussed

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	155	358	46.31	415	53.69	773	5	47
Urban	37	19	9.6	179	90.4	198	5	40
Total	192	377	38.83	594	61.17	971	5	45

Table 7 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas was approximately 5. Further, average pupil teacher ratio was 45:1, however, this ratio was 40:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding Post Graduate degree was more than male teachers. This trend was reverse for teachers holding Graduation degree. Further, percentage of female teachers studied upto secondary level was higher than their counterparts. However, no male teacher was below Class X certificate holder. Besides, approximately 42% teachers were Class X passed.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	79	39.3	54	26.87	51	25.37	17	8.46	201
Female	1	0.43	102	43.97	53	22.84	50	21.55	26	11.21	232
Total	1	0.23	181	41.8	107	24.71	101	23.33	43	9.93	433

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects studied

District	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	2	1	144	71.64	49	24.38	6	2.99	201
	Female	8	3.45	167	71.98	54	23.28	3	1.29	232
	Total	10	2.31	311	71.82	103	23.79	9	2.08	433
Science	Male	5	2.49	154	76.62	40	19.9	2	1	201
	Female	17	7.33	165	71.12	46	19.83	4	1.72	232
	Total	22	5.08	319	73.67	86	19.86	6	1.39	433
Language (Medium)	Male	0	0	86	42.79	61	30.35	54	26.87	201
	Female	2	0.86	106	45.69	66	28.45	58	25	232
	Total	2	0.46	192	44.34	127	29.33	112	25.87	433
Social Science	Male	1	0.5	113	56.22	49	24.38	38	18.91	201
	Female	2	0.86	132	56.9	53	22.84	45	19.4	232
	Total	3	0.69	245	56.58	102	23.56	83	19.17	433

The data reveals that in Mathematics and Language, the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this trend was reverse in Science and Social Sciences. Similarly, the percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than female teachers. The percentage of female teachers who studied Mathematics, Language and Social Science up to secondary level was slightly higher than their counterparts. Besides, the percentage of female teachers who studied Mathematics and Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
192	Male	164	32	5
	Female	171	53	8
	Total	335	85	13

The majority of teachers were diploma/certificate holders in Primary/Elementary Education and very few male teachers were M.Ed degree holders. Besides, approximately 1/5th teachers were B.Ed.

Availability of Teaching Aids

Data collected illustrates that all teaching aids were available to 85% and more to teachers in urban schools except Flash Cards. Similarly, all teaching aids were available to 89% and more teachers teaching in rural schools except mathematics kit.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		Total No. of Teachers
School Complex	N	5
	%	1.3
Block Resource Centre	N	202
	%	52.47
Teacher Resource Centre	N	12
	%	3.12
Cluster Resource Centre	N	63
	%	16.36
DIET	N	49
	%	12.73
SCERT	N	51
	%	13.25
Others	N	3
	%	0.78

The in-service training programme were organised in various institutions in the districts during the last three years and teachers from both rural and urban areas attended the programme conducted by BRC, CRC, SCERT and DIET.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	67
Content Enrichment	105
Production of Instructional Material	8
Use of Instructional Material	8
Assessment of Pupil Learning	99
Competency based Teaching Learning	157
Activity based Joyful Learning	59
Others	50

During in-service training programmes, number of themes were covered. Maximum in-service training programmes were conducted on 'Competency Based Teaching-Learning' followed by 'Content Enrichment'. Minimum programmes were conducted on 'Use of Instructional Material' and production of 'Instructional Materials'. The effectiveness of various training programmes is given in the Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	109	100	119	116
	%	32.83	30.12	35.84	34.94
Average	N	216	215	206	205
	%	65.06	64.76	62.05	61.75
Low	N	7	17	7	11
	%	2.10	5.12	2.10	3.31

It is evident that more than 64% training programmes were averagely effective in terms of utility of knowledge gained during training programmes. Approximately, 30% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 62% to 64% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 1/3rd of teachers.

Out of 433 sampled teachers, 101(23.33%) teachers were without any in-service training during last three years. The percentage of female teachers who have not attended any in-service programme was higher than male teachers. The same was also true for the teachers of both urban and rural areas.

Academic Assistance received from various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from Head of the School and it was followed by Other category teachers of the School from other sources they were getting assistance sometimes.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for nearly all students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	147	3.19	94	1.75
Illiterate	1543	33.51	3120	58.10
Literate	65	1.41	87	1.62
Primary	766	14.26	686	12.77
Secondary	1680	31.28	514	9.57
Sr. Secondary	279	5.19	67	1.25
Degree and above	111	2.06	23	0.43
Donot Know/Cannot say	13	0.24	13	0.24

Table 14 indicates that approximately 34% fathers and 58% mothers of the students were illiterate. Only 2% fathers and less than 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	157	59	216	36	10	46
Household/ Housewife	7	2	9	3443	623	4066
Farmer	1393	26	1419	51	4	55
Poultry farming	7	3	10	0	1	1
Agricultural labour	680	77	757	121	22	143
Picking forest produce	1	0	1	0	2	2
Domestic Servent	26	19	45	16	105	121
Street Vender	57	58	115	0	2	2
Manual unskilled worker	301	140	441	17	21	38
Skilled worker	413	166	579	22	20	42
Clerical worker	152	30	182	6	6	12
Shopkeeper	174	49	223	10	4	14
Employer	25	7	32	0	0	0
Manager/Senior Officer	110	58	168	3	8	11
Others	249	158	407	27	24	51

In rural areas, majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mothers and fathers were Manager/Senior Officers. Number of Manager/Senior Officer fathers more in rural areas than urban areas. In decreasing order, fathers were working as farmer, agricultural labour, skilled worker, manual

unskilled worker, Others, shopkeeper, clerical work, manager/senior officer, street vendor and household etc. In decreasing order mothers were working as household/housewives, agricultural labour, domestic servant, farmer, Others, skilled worker, manual unskilled worker and shopkeeper etc. However, not a single mother was employer.

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16

Academic Assistance received from Family Members and Others

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	483	503	68	72	551	575
	%	24.14	28.73	16.75	16.14	22.89	26.17
Mother	N	136	169	40	26	176	195
	%	6.8	9.65	9.85	5.83	7.31	8.88
Elder Brother/Sister	N	446	393	89	112	535	505
	%	22.29	22.44	21.92	25.11	22.23	22.99
Others	N	359	275	67	90	426	365
	%	17.94	15.71	16.5	20.18	17.7	16.61

Girls and boys in rural as well as overall were getting more help from father/guardian than any other. Also, in rural areas girls were getting more academic assistance from father than boys. But the trend was reverse in urban areas where as both boys and girls were getting more assistance from elder brother/sister as compared with other family members. The descending order of academic assistance provided by the family members was fathers, elder brother and sisters, others and mothers, in rural areas. However, in urban areas, it was elder brother/sister, others, fathers and mothers.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was true only for urban areas. The percentage of girls attending school between 80-90% of working days was also more than boys. Only 3 to 4% percent boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending schools more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Haryana. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

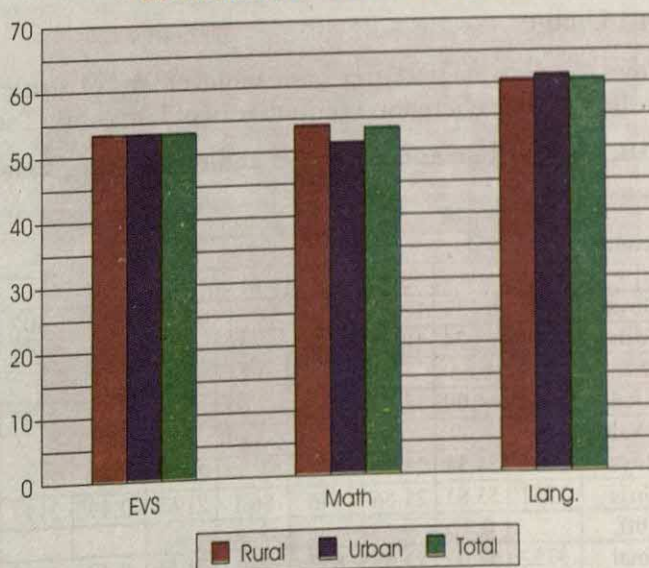
Genderwise and Areawise Achievement

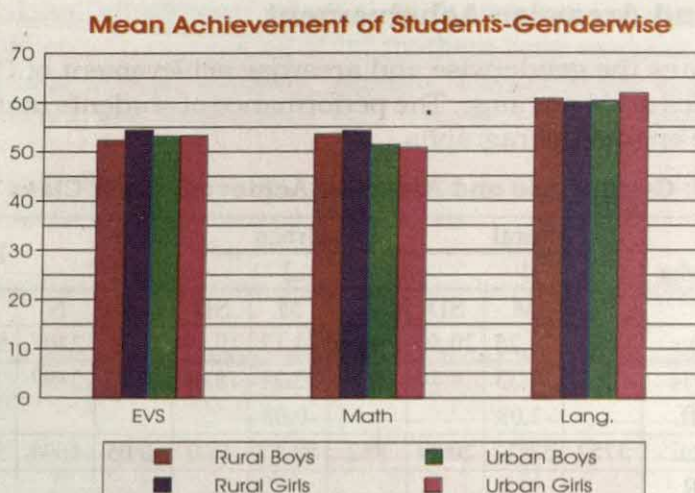
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD	N	M	SD		
EVS	Boys	2001	52.25	20.59	406	53.13	19.19	0.88	2407	52.39	20.36	0.83
	Girls	1751	54.33	19.79	446	53.21	18.66	-1.12	2197	54.1	19.57	-1.12
	Diff.		-2.08			-0.08				-1.71		
	Total	3752	53.22	20.24	852	53.17	18.9	-0.05	4604	53.21	20	-0.07
	CR Value		-3.15			-0.06				-2.9		
Mathe- matics	Boys	2001	53.52	18.15	406	51.35	17.18	-2.17	2407	53.16	18	-2.3
	Girls	1751	54.23	18.88	446	50.8	19.59	-3.43	2197	53.53	19.07	-3.33
	Diff.		-0.71			0.55				-0.37		
	Total	3752	53.85	18.49	852	51.06	18.47	-2.79	4604	53.33	18.52	-3.98
	CR Value		-1.17			0.44				-0.68		
Langu- age	Boys	2001	60.64	17.23	406	60.22	16.42	-0.42	2407	60.57	17.09	-0.47
	Girls	1751	59.95	17.9	446	61.76	16.21	1.81	2197	60.31	17.58	2.06
	Diff.		0.69			-1.54				0.26		
	Total	3752	60.31	17.55	852	61.03	16.32	0.72	4604	60.45	17.33	1.15
	CR Value		1.2			-1.38				0.51		

Mean Achievement of Students-Areawise





Environmental Studies

The data reveals that there was no significant difference in achievement of rural and urban students. The overall performance and the performance in rural areas of girl students was significantly better than boys.

Mathematics

The data reveals that the achievement of rural students, both boys and girls was significantly better than their counterparts in urban areas. Within areas, there was no significant difference in achievement between boys and girls.

Language

The achievement of urban girls was found to be significantly better than rural girls. In other cases, there was no significant difference in achievements.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram-mar & Usage	Boys	2001	64.39	17.73	406	64.71	16.7	0.32	2407	64.45	17.56	0.35
	Girls	1751	63.74	18.75	446	65.16	16.72	1.42	2197	64.03	18.36	1.56
	Diff.		0.65			-0.45				0.42		
	Total	3752	64.09	18.21	852	64.94	16.7	0.85	4604	64.25	17.94	1.32
	CR Value		1.09			-0.39				0.79		
Compre- hension	Boys	2001	54.38	21.85	406	52.74	21.36	-1.64	2407	54.1	21.77	-1.41
	Girls	1751	53.61	21.86	446	56.1	21.63	2.49	2197	54.12	21.83	2.17
	Diff.		0.77			-3.36				-0.02		
	Total	3752	54.02	21.85	852	54.5	21.56	0.48	4604	54.11	21.8	0.59
	CR Value		1.08			-2.28				-0.03		

The data reveals that in Grammar and Usage, there was no significant difference in achievement across and within areas.

Reading Comprehension

In Reading Comprehension, achievement of urban girls was significantly better than rural girls. In urban areas, performance of girls was significantly better than boys.

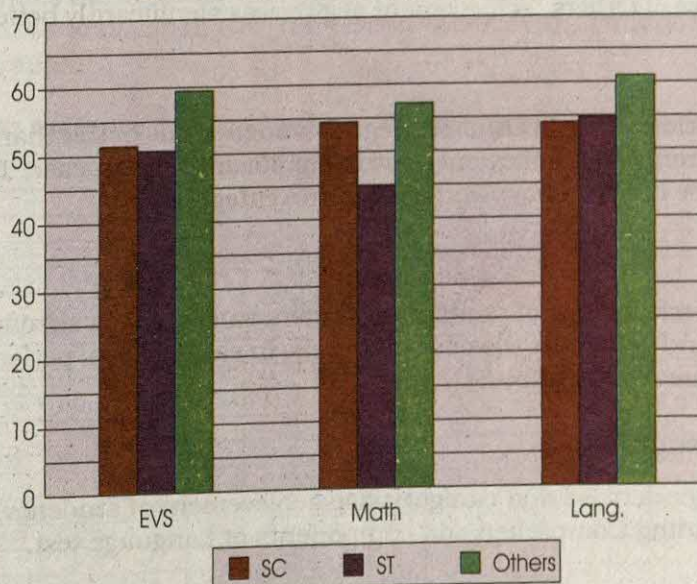
Genderwise and Categorywise Achievement

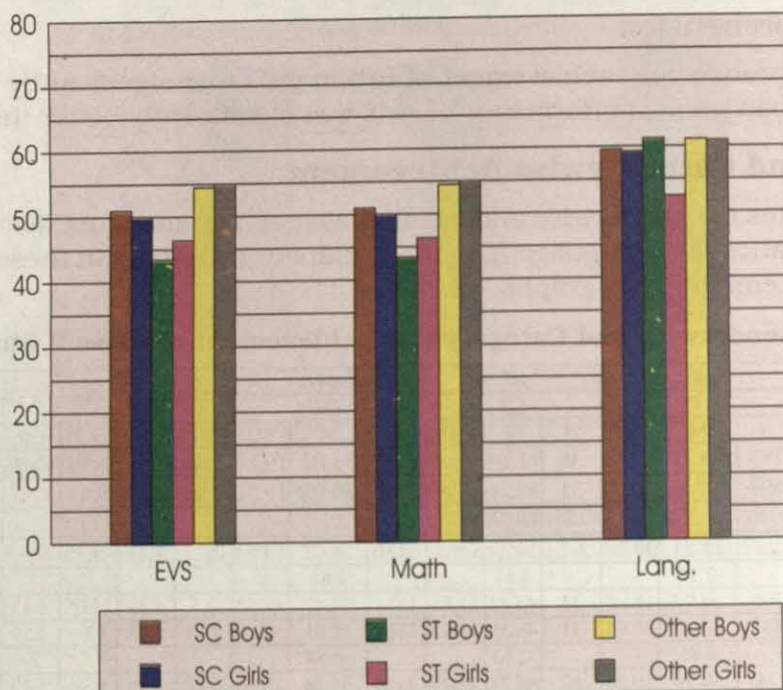
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Boys	790	50.71	21.13	36	61.94	19.64	1581	53.02	19.89	2.31	2.56	-8.92	-2.69	11.23	3.34
	Girls	597	52.1	20.07	31	45.56	17.54	1569	55.03	19.32	2.93	3.07	9.47	2.97	-6.54	-2.01
	Diff.		-1.39			16.38			-2.01							
	Total	1387	51.31	20.69	67	54.37	20.3	3150	54.02	19.63	2.71	4.13	-0.35	-0.14	3.06	1.2
	CR Value		-1.25			3.61			2.88							
Mathematics	Boys	790	50.97	18.65	36	43.42	11.84	1581	54.47	17.62	3.5	4.39	11.05	5.46	-7.55	-3.63
	Girls	597	50.02	20.05	31	46.35	18.42	1569	55.01	18.5	4.99	5.28	8.66	2.59	-3.67	-1.08
	Diff.		0.95			-2.93			-0.54							
	Total	1387	50.56	19.26	67	44.78	15.19	3150	54.74	18.06	4.18	6.86	9.96	5.29	-5.78	-3
	CR Value		0.90			-0.76			-0.84							
Language	Boys	790	59.53	18.1	36	61.18	16.63	1581	61.07	16.56	1.54	2.01	-0.11	-0.04	1.65	0.58
	Girls	597	59.23	17.87	31	52.42	16.85	1569	60.88	17.44	1.65	1.93	8.46	2.77	-6.81	-2.19
	Diff.		0.3			8.76			0.19							
	Total	1387	59.4	18	67	57.13	17.18	3150	60.98	17	1.58	2.77	3.85	1.82	-2.27	-1.05
	CR Value		0.31			2.14			0.31							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that in case of boys, achievement of ST was better than the Others category followed by SC and the differences in achievement were significant categorywise. In case of girls, performance of Others was better than SC followed by ST and in each case, differences in achievement were significant. The differences in achievement between Others vs SC, in ST category achievement of boys was significantly better than girls, whereas in case of Others, achievement of girls was significantly better than boys.

Mathematics

In Mathematics, performance of Others category students was better than ST followed by SC and the differences in achievement were significant in each case. There was no significant difference between boys and girls within categories.

Language

Data reveals that performance of students of Others category was significantly better than SC students and same was the case with girls. In case of boys, performance of ST was better than others followed by SC.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	790	63.52	18.55	36	67	19.3	1581	64.85	16.98	1.33	1.69	-2.15	-0.66	3.48	1.06
	Girls	597	62.93	18.5	31	56	16.26	1569	64.61	18.3	1.68	1.89	8.61	2.91	-6.93	-2.3
	Diff.		0.59			11			0.24							
	Total	1387	63.27	18.52	67	61.91	18.66	3150	64.73	17.65	1.46	2.48	2.82	1.23	-1.36	-0.58
	CR Value		0.59			2.53			0.38							
Reading Comprehension	Boys	790	52.86	22.77	36	51.48	17.86	1581	54.78	21.32	1.92	1.98	3.3	1.09	-1.38	-0.45
	Girls	597	53.08	22.59	31	46.45	25.56	1569	54.67	21.43	1.59	1.48	8.22	1.78	-6.63	-1.42
	Diff.		-0.22			5.03			0.11							
	Total	1387	52.95	22.68	67	49.15	21.74	3150	54.72	21.37	1.77	2.46	5.57	2.08	-3.8	-1.39
	CR Value		-0.18			0.92			0.14							

The data reveals that achievement of girls of Others category was better than SC followed by ST and the differences in achievement were significant between Others vs ST and ST vs SC. Further, achievement of students of Others category was significantly better than SC students. In ST category, achievement of boys was significantly better than girls.

Reading Comprehension

The data reveals that in case of boys, achievement of Others was significantly better than SC. Further, achievement of students of Others category was better than SC followed by ST and the differences in achievement were significant between Others vs SC and Others vs ST. Within categories, there was no significant difference in achievement between boys and girls.

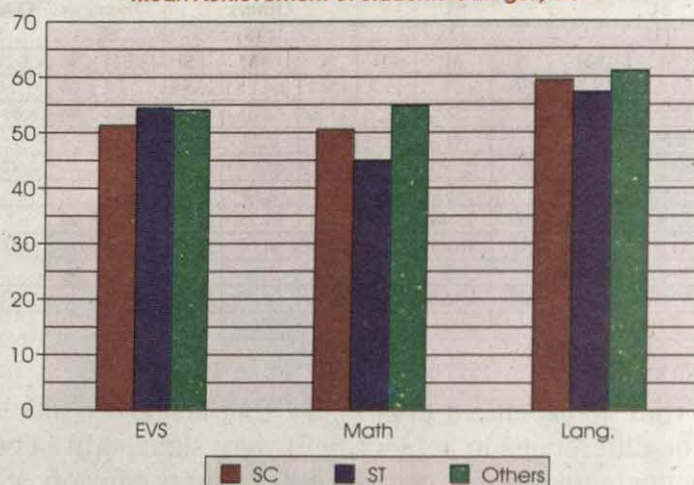
Areawise and Categorywise achievement

In this section, we shall discuss the achievement of students areawise and categorywise. Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

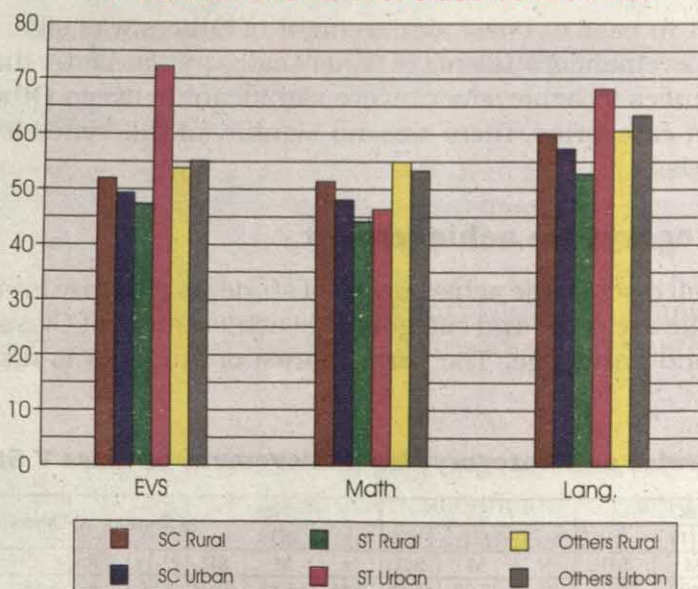
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	1048	51.97	20.85	48	47.29	16.18	2656	53.82	20.03	1.85	2.46	6.53	2.76	-4.68	-1.93
	Urban	339	49.26	20.05	19	72.24	18.91	494	55.12	17.32	5.86	4.38	-17.12	-3.88	22.98	5.14
	Diff.		2.71			-24.95			-1.3							
	Total	1387	51.31	20.69	67	54.37	20.3	3150	54.02	19.63	2.71	4.13	-0.35	-0.14	3.06	1.2
	CR Value		2.14			-5.06			-1.49							
Mathematics	Rural	1048	51.39	19.18	48	44.13	16.02	2656	55	18.11	3.61	5.24	10.87	4.65	-7.26	-3.04
	Urban	339	48.01	19.33	19	46.4	13.11	494	53.33	17.73	5.32	4.03	6.93	2.23	-1.61	-0.51
	Diff.		3.38			-2.27			1.67							
	Total	1387	50.56	19.26	67	44.78	15.19	3150	54.74	18.06	4.18	6.86	9.96	5.29	-5.78	-3
	CR Value		2.80			-0.60			1.92							
Language	Rural	1048	60.09	18.03	48	52.76	17.64	2656	60.54	17.32	0.45	0.69	7.78	3.03	-7.33	-2.81
	Urban	339	57.27	17.75	19	68.16	9.5	494	63.33	14.95	6.06	5.16	-4.83	-2.12	10.89	4.57
	Diff.		2.82			-15.4			-2.79							
	Total	1387	59.4	18	67	57.13	17.18	3150	60.98	17	1.58	2.77	3.85	1.82	-2.27	-1.05
	CR Value		2.53			-4.60			-3.71							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas achievement of Others was better than SC followed by ST and the differences in achievement were significant between Others vs SC and Others vs ST. In urban areas, achievement of ST was better than Others followed by SC and categorywise differences were significant in each case. In SC category, achievement of rural students was significantly better than urban students whereas in ST category, performance of urban students was significantly better than rural students.

Mathematics

Data reveals that in both rural and urban areas, performance of Others was better than SC followed by ST. In rural areas, these differences were significant between each categories whereas in urban areas, differences were significant between Others vs SC and Others vs ST. In SC category, achievement of rural students was significantly better than urban students.

Language

In rural areas differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. In urban areas, performance of ST was better than Others followed by SC and differences in achievement were significant among the categories. In SC category, achievement of rural students was significantly better than urban students, whereas in ST and Others category, achievement of urban students was significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Rural	1048	63.87	18.75	48	56.75	17.38	2656	64.31	17.98	0.44	0.65	7.56	2.98	-7.12	-2.77
	Urban	339	61.4	17.69	19	74.95	15.43	494	66.99	15.54	5.59	4.7	-7.96	-2.21	13.55	3.69
	Diff.		2.47			-18.2			-2.68							
	Total	1387	63.27	18.52	67	61.91	18.66	3150	64.73	17.65	1.46	2.48	2.82	1.23	-1.36	-0.58
	CR Value		2.20			-4.20			-3.43							
Reading Comprehension	Rural	1048	53.79	22.36	48	46.11	23.21	2656	54.26	21.6	0.47	0.58	8.15	2.41	-7.68	-2.25
	Urban	339	50.38	23.5	19	56.84	15.46	494	57.23	19.88	6.85	4.4	0.39	0.11	6.46	1.71
	Diff.		3.41			-10.73			-2.97							
	Total	1387	52.95	22.68	67	49.15	21.74	3150	54.72	21.37	1.77	2.46	5.57	2.08	-3.8	-1.39
	CR Value		2.35			-2.20			-3.01							

In rural areas differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. In urban areas, performance of ST was better than Others followed by SC and differences in achievement were significant among the categories. In SC category, achievement of rural students was significantly better than urban students, whereas in ST and Others category, achievement of urban students was significantly better than rural students.

Reading Comprehension

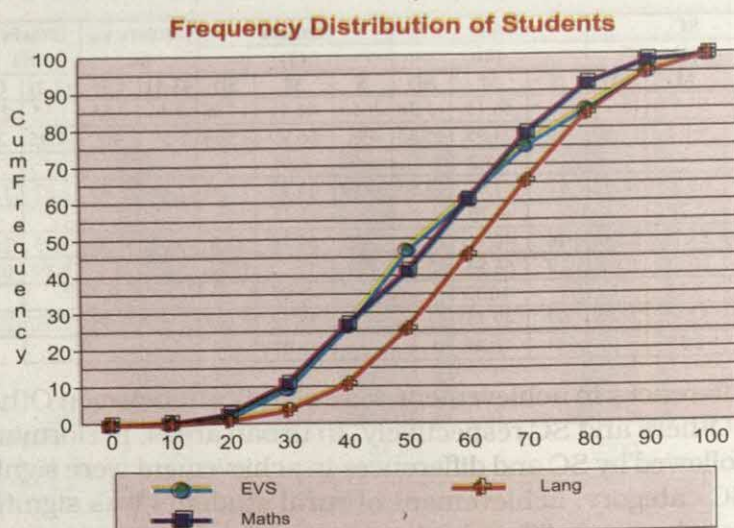
The data reveals that in rural areas, differences in achievement between Others vs ST and ST vs SC were significant and were in favour of Others and SC respectively. In Urban areas achievement of others was significantly better than SC. In SC category, achievement of rural students was significantly better than urban students whereas in ST and Others categories, achievement of urban students was significantly better than rural students.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	10	82	361	782	949	699	599	457	453	212
	cf	10	92	453	1235	2184	2883	3482	3939	4392	4604
	cf(%)	0.22	2.00	9.84	26.82	47.44	61.53	75.63	85.56	95.40	100
Math	f	25	115	376	739	665	882	836	615	288	63
	cf	25	140	516	1255	1920	2802	3638	4253	4541	4604
	cf(%)	0.54	3.04	11.21	27.26	41.70	60.86	79.02	92.38	98.63	100
Language	f	5	44	126	323	688	925	917	844	518	214
	cf	5	49	175	498	1186	2111	3028	3872	4390	4604
	cf(%)	0.11	1.06	3.80	10.82	25.76	45.85	65.77	84.10	95.35	100

The figures posted in Table 23 revealed that in all the three subjects, the distribution of scores covered the entire range from 0-100 percent. The least number of students in EVS (10), in Mathematics (25) and in Language (5) were in the range of 0-10 percent. The maximum number of cases in EVS (949), in Mathematics (882) and in Language (925) were in the range 40-50 percent, 50-60 percent and 50-60 percent respectively. The 52.56 percent students in EVS, 58.30 percent in Mathematics, and 74.24 percent in Language scored more than 50 percent marks whereas 38.47 percent in EVS, 39.14 percent in Mathematics and 54.15 percent in Language scored more than 60 percent marks.



Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	3
25 to less than 50	Difficult	16	10	14
50 to less than 75	Average	21	22	15
75 to 100	Very Easy	3	8	6

No item is very difficult in EVS and Language and only 3 items were found very difficult in Mathematics. About 40% in EVS, 25% in Language and 35% items in Mathematics were difficult. However, about 53% items in EVS, 55% items in Language and 38% items in Math belonged to the category of average. Nearly 7% in EVS, 20% in Language and 15% in Math were very easy.

Table 25: Distribution of test items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	1	0	2
.30 to less than .70	Average Discrimination	33	36	31
Less than .30	Poor Discrimination	6	4	5

Very less items in each subject had good D.I. i.e., more than 0.70. About 80% items in each subject had average value. However, nearly 12% items in every subject were very easy, hence had poor D.I.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.84	0.88
2	Mathematics	38	0.75	0.86
3	Language	40	0.73	0.84

IMPACT OF INTERVENING VARIABLES

School

Teaching time, and involvement of community through various committees influence the learning achievement of children in EVS and Mathematics. The positive association of community participation with the criterion Mathematics indicates that active involvement of community through various committees help the children in improving their learning skills in Mathematics only. Teaching time helped the children in improving their skills in EVS and mathematics.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	35.348	--	26.098	--	36.373	--
PTR	-0.062	-0.072	-0.035	-0.065	-0.089	-0.132
Com Participation	1.931	0.063	3.217*	0.172	0.632	0.060
Teach-aid	1.221	0.011	0.123	0.057	0.196	0.046
Physical facility	0.088	0.070	0.094	0.009	0.045	0.024
Ancillary facility	1.674*	0.115*	0.021	0.022	0.177	0.130
Instructional time	0.080*	0.134*	0.067*	0.163*	0.027	0.097
Working day	0.012	0.004	0.017	0.011	0.075	0.057
Index-Comp. TLM	0.554	0.140*	0.139	0.065	-0.108	-0.014
R²	0.081		0.066		0.049	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 8.1% of total variance in EVS and 6.6% in Mathematics independently.

Teacher

Teaching experience and teachers' training, help from school organisation, teaching aids and teaching style of teachers influence the learning achievement of children in EVS, Mathematics and Language. The positive association of help from senior colleagues of school organisation with the criteria EVS, Mathematics and language indicates that active involvement of senior colleagues of the school organization with teachers in teaching-learning processes help the children in improving their learning skills in these subjects. Teaching aids and teaching style of teachers have also helped the children to some extent in learning the Language. However, teaching experience helped the children in improving their learning skills in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	48.822	--	46.425	--	56.712	--
Index-Qualification	0.048	0.008	0.069	0.062	0.142	0.010
Index-Experience	0.240**	0.020*	0.631**	0.123**	0.321	0.002
Index-Teaching Aid	3.354	0.071	3.327	0.096*	6.524**	0.178**
Index-School Org.	0.571*	0.090	0.1800**	0.164**	0.327	0.099*
R²	0.057		0.030		0.050	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 5.7% of total variance in EVS, 3.0% in Mathematics and 5.0% in Language independently.

Pupil

Teaching-learning processes adopted by teachers, age of students, educational status and occupation of parents and schooling practices and academic assistance provided by the family members to the children influence the learning achievement of children in three subjects EVS, Mathematics and Language. The positive association of teaching-learning processes and schooling practices and academic assistance provided by the family members with the three criteria indicates that active involvement of teachers in school and family members at home help the children in improving their learning achievement in three subjects. Educational status and occupation of parents help the children in improving their learning achievement in all the subjects. The negative association of age with the three criteria indicates that the children of higher age group scores poorly and vice-versa. This is the universal phenomenon.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	57.149	--	64.107	--	64.046	--
Index-Ed & Occu	2.991**	0.092**	2.572**	0.104**	2.891**	0.103**
Index-Schooling	0.021*	0.016*	1.183*	0.011	0.371	0.005
Index-TLP	7.007**	0.133**	7.374**	0.152**	1.755**	0.042**
Age	-0.765**	-0.074**	-1.047**	-0.102**	-0.327	-0.056**
Detention	-0.647*	-0.048**	-1.270**	-0.083**	-1.242*	-0.077**
Attendance	0.038*	0.032*	0.021	0.013	0.045	0.001
R²	0.031		0.041		0.018	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 3.1% of total variance in EVS, 4.1% in Mathematics and 1.8% in Language independently.

One can infer that infrastructure facilities of the schools did not help the children in enhancing their learning achievement in the three subjects. Active involvement of senior colleagues of the school organisation with teachers have helped the children to some extent, in improving their learning skills in EVS and Mathematics. Further, active involvement of teachers in school and family members at home in their day-to-day home work help the children in improving their learning achievement in three subjects.

Comparison of achievement between DPEP vs Non-DPEP Districts

In Haryana out of 4 districts, Hissar and Kaithal are the two DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	1380	49.2	20.86	1027	56.68	18.84	9.2
	Girls	1037	51.84	18.85	1160	56.12	19.98	5.16
	Diff.		-2.64			0.56		
	Total	2417	50.33	20.06	2187	56.38	19.45	10.38
	CR Value		-3.25			0.67		
Mathematics	Boys	1380	51.29	18.56	1027	55.66	16.91	6.01
	Girls	1037	51.93	20.02	1160	54.96	18.07	3.71
	Diff.		-0.64			0.7		
	Total	2417	51.56	19.2	2187	55.29	17.54	6.89
	CR Value		-0.8			0.94		
Language	Boys	1380	59.7	17.26	1027	61.73	16.81	2.9
	Girls	1037	58.66	17.13	1160	61.8	17.85	4.2
	Diff.		1.04			-0.07		
	Total	2417	59.25	17.21	2187	61.76	17.36	4.92
	CR Value		1.47			-0.09		

The data reveals that in all the three subjects, the achievement of students of non-DPEP districts was significantly better than students of DPEP districts.

HARD SPOT OF LEARNING

In EVS, no item was found very difficult. However, 16(40%) items were correctly responded to by less than 50% of students and found difficult. Contentwise, the hard spots in learning EVS was identified in identification of natural features of the country, identification of boundaries with neighbouring countries, understanding a longitude and latitude, system of governance in India, knowledge of postal service, knowledge of pre British rule, knowledge of solar system, planets, understanding of eclipse, effect of weather conditions on human bodies, knowledge of composition of air, effect of weather condition on human bodies, knowledge of pollution free fuel, knowledge of soil erosion, knowledge of health workers, knowledge of plants in deserts, conservation of wild animals and knowledge of carriers of disease.

In Language, no item was found very difficult. But, 10(25%) items were correctly responded to by less than 50% of students and found difficult. Contentwise, the hard spots in learning language was identified as structure, comprehension of instructions, comprehension of timetable, comprehension of informatical passage and comprehension of story.

In Mathematics, items 23, 29 and 37 were correctly responded to by less than 25% of students and found very difficult. However, 14(37%) items were correctly responded to by less than 50% of students and found difficult. Contentwise, the hard spots in learning Mathematics was identified as fraction (descending/ascending order, simplification), measurement of area (conversion from one unit to other, time) conversion from percent to fraction, percentage, BODMAS, triangle according to sides and circle-radius diameter concept.

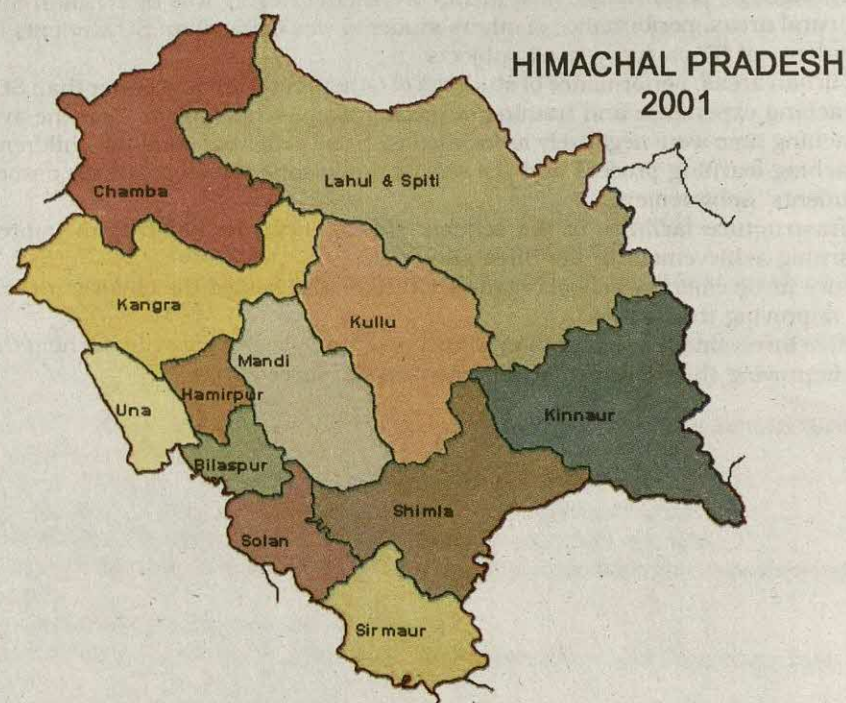
Findings

- Musical instruments were available approximately in 17% schools.
- TV and computer were available in only 1% percent schools.
- Competency based Teaching Materials were more available for primary classes in 2001 as compared with the year 1998.
- Students were getting more benefit under Mid-day meal incentive scheme as compared to rest of the incentive schemes implemented in the state.
- Average number of working days in schools was approximately 219.
- AEC, SMC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Percentage of female teachers was higher than male teachers.
- Average number of teachers in urban and rural schools were same.
- Teacher pupil ratio was higher in rural schools than urban schools.
- Percentage of PG degree holder female teachers was more than their counterparts male teachers.
- Not a single male teacher was below Class X.
- Degree holder male teachers were more in Mathematics and Language than female teachers.
- Majority of teachers were diploma/certificate holders in primary/elementary education.
- Majority of teaching aids were available in more than 85% schools.
- In general, teaching aids were more available to female teachers than male teachers.
- Maximum teachers participated in in-service training programmes conducted by Block Resource Centre and minimum teachers participated in programmes conducted by other agencies.
- Maximum in-service training programmes were conducted on 'Competency based Teaching-learning
- Minimum in-service training programmes were conducted on 'Use of Instructional Material' and production of Instructional materials during last three years.

- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately 23% teachers have not attended any in-service training programme during last three years.
- In most of cases, teachers were getting assistance from 'Head of Schools'.
- For almost all students medium of instruction in the school was same as the language spoken at home.
- In general, educational qualification of mother was poorer than father.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Maximum number of fathers were skilled worker and mothers were housewives in urban areas.
- Students were getting more academic assistance from fathers/guardians than other family members.
- Rural girls were getting more academic assistance from fathers than boys in rural areas.
- In urban areas both boys and girls were getting more assistance from elder brothers/sisters than other family members.
- Approximately 88% students were attending schools on above 70% working days.
- Less than 4% students were attending schools below 60% of the total working days.
- Achievement of rural girls was better than rural boys in EVS and Mathematics. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In Mathematics, there was significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In rural areas, performance of others students was better than SC students followed by students of ST category in all subjects.
- In urban areas, performance of students of Others category was better than SC students.
- Teaching experience and training of teacher, pupils age (higher than the average) and teaching time were negatively associated with the achievement of the children. However, teaching-learning process and the school organisation were positively associated with students' achievement.
- Infrastructure facilities of the schools did not help the children in improving their learning achievement in the three subjects.
- Active involvement of school organisation have also helped the children to some extent, in improving their skills.
- Active involvement of teachers in school and family members at home help the children in improving their learning achievement in the three subjects.

INTRODUCTION

Himachal Pradesh as a state came into existence in 1948 after merging 31 princely states. At the time of formation it ranked lowest (7%) in the states in literacy. But, the progress done by H.P. is very much heartening. As per Census 2001, the total literacy is 77.13% whereas for male it is 86.02% and 68.08% for female. The Gross Enrolment Ratio for the state is 92 girls per 100 boys. There are 12 districts in the state.



To materialise the goal of UEE in state extensive efforts have been made to extend the network of primary schools so as to provide children an easy access.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 200 schools were samples from Chamba, Kangra, Kinnaur and Shimla districts of Himachal Pradesh. Out of total sampled schools 50 schools were drawn from each district.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	176	176	100	0	0	0	0
Urban	24	24	100	0	0	0	0
Total	200	200	100	0	0	0	0

Teachers

A total 599 teachers were sampled from 200 sampled schools. Out of 599 teachers, 404 were male teachers and 195 were female teachers. Areawise, 528 teachers were from rural areas and 71 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Category-wise data										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	64	16.58	35	9.07	59	15.28	228	59.07	386
	Female	12	8.45	20	14.08	10	7.04	100	70.42	142
	Total	76	14.39	55	10.42	69	13.07	328	62.12	528
Urban	Male	1	5.56	1	5.56	1	5.56	15	83.33	18
	Female	0	0	1	1.89	0	0	52	98.11	53
	Total	1	1.41	2	2.82	1	1.41	67	94.37	71
Total	Male	65	16.09	36	8.91	60	14.85	243	60.15	404
	Female	12	6.15	21	10.77	10	5.13	152	77.95	195
	Total	77	12.85	57	9.52	70	11.69	395	65.94	599

Table 2 shows that the percentage of male teachers was higher than female teachers in case of SC and OBC categories. But this trend was reverse in case of ST and other categories. However, not a single Scheduled Caste and Scheduled Tribe female teacher could be included in the sample.

Students

A total number of 4,553 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Chamba	Rural	598	550	1148
	Urban	30	56	86
	Total	628	606	1234
Kangra	Rural	580	612	1192
	Urban	26	84	110
	Total	606	696	1302
Kinnaur	Rural	398	471	869
	Urban	398	471	869
	Total	363	362	725
Shimla	Rural	232	191	423
	Urban	595	553	1148
	Total	1939	1995	3934
Total	Rural	1939	1995	3934
	Urban	288	331	619
	Total	2227	2326	4553

Out of 4,553 students, 3,934 students were from rural areas and remaining 619 students were from urban areas. Out of the total sample, 2,227 were boys and 2,326 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	28	15.91	28	15.91	64	36.36	69	39.2	43	24.43
Urban	3	12.5	3	12.5	4	16.67	9	37.5	11	45.83
Total	31	15.5	31	15.5	68	34	78	39	54	27

Table 4 indicates that out of 176 rural sampled schools, approximately 39% schools in rural areas and 38% schools in urban areas were secondary schools. The percentage of elementary schools in the sampled schools was approximately 36% and 17% respectively for rural and urban areas. However, no school having only primary classes was included in the sample. Besides, the percentage of Sr. Secondary schools in the sampled schools was approximately 24% and 46% respectively from rural and urban areas.

Facilities related to teaching-learning process

It was observed that maps, globes, game equipments and children's books were available in more than 82% schools. Mini tool kit, maths kit, magazines, journals and newspaper were available in 51% to 59% schools. Charts, play material and toys, primary science kit and reference books, dictionaries, encyclopedia were available in 75% to 80% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chalk and duster and chairs for teachers, water pitcher, ladel and glasses were available in 93% and more schools. Whereas, tables for teachers, mats and furniture for students and dustbin were available in 83% to 85% schools. Besides, play ground, pin-up board/notice board were available in 63% and 67% schools respectively. However, musical instruments were available in only 42% schools.

Ancillary Facilities

Computer was available only in 18% schools. Toilet facilities, annual medical check-up for children and first aid kit were available in 54% and 59% schools. Besides, separate toilet facilities for girls and TV were available in 42% and 37% schools. However, safe drinking water facility, electric connection were available in 79% and 70% schools. But, immunisation facility was available in 63% schools.

Competency based Teaching Materials

Information gathered shows that out of 200 schools, competency based textbooks, work book and teachers' handbooks were not available even in a single school in the year 2001. Whereas, teaching aids were available in only one school in 2001, for classes I to V.

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	306	174	11	10	135	143	71	850	523	1177
	%	58.51	14.78	2.10	.85	25.81	12.15	13.58	72.22	100	100
Free uniform	N	56	51	13	12	24	24	57	62	150	149
	%	37.33	34.23	8.67	8.05	16.00	16.11	38.00	41.61	100	100
Free textbooks	N	3042	3043	959	957	1927	2678	1208	1067	7136	7745
	%	42.63	39.29	13.44	12.36	27.00	34.58	16.93	13.77	100	100
Scholarship for regular attendance	N	31	38	23	141	2	3	15	19	71	201
	%	43.66	18.91	32.39	70.15	2.82	1.49	21.13	9.45	100	100
Other Schemes	N	128	119	88	95	10	18	23	29	249	261
	%	51.41	45.59	35.34	36.44	4.02	6.90	9.23	11.11	100	100

Various incentive schemes like mid-day meal, free uniform, free textbook, scholarship for regular attendance were made available to the pupils across the categories. In case of mid-day meal and free uniform, both boys and girls from SC and Others category were maximum benefited. Boys and girls from SC categories were also getting benefit from free textbook, scholarship for regular attendance and other schemes.

Instructional Time

Average number of working days in schools was approximately 226 days on an average, schools were having 9 periods in a day of approximately of 35 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 176 rural schools, 155(88%) schools were having Parent Teacher Association. Almost same trend was in urban schools. Area Education Committees and School-Management Committees were found more in urban schools than rural schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	34	3	37
	%	19.32	12.5	18.5
AEC	N	3	1	4
	%	1.7	4.17	2
SMC	N	16	4	20
	%	9.09	16.67	10
PTA	N	155	21	176
	%	88.07	87.5	88

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	176	1000	69.01	449	30.99	1449	8	26
Urban	24	134	36.22	236	63.78	370	15	24
Total	200	1134	62.34	685	37.66	1819	9	26

Table 7 shows that overall number of male teachers was more than female teachers. However, percentage of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 8 and 15 respectively. Further, average pupil teacher ratio in rural schools was 26:1, however, this ratio was 24:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers studied upto secondary level was higher than their counterparts. However, only 1% teachers were below Class X level.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	1	0.25	26	6.44	64	15.84	198	49.01	115	28.47	404
Female	2	1.03	22	11.28	29	14.87	78	40	64	32.82	195
Total	3	0.5	48	8.01	93	15.53	276	46.08	179	29.88	599

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various subjects studied

Subjects	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	8	1.98	131	32.43	146	36.14	119	29.46	404
	Female	5	2.56	107	54.87	68	34.87	15	7.69	195
	Total	13	2.17	238	39.73	214	35.73	134	22.37	599
Science	Male	11	2.72	127	31.44	142	35.15	124	30.69	404
	Female	3	1.54	88	45.13	60	30.77	44	22.56	195
	Total	14	2.34	215	35.89	202	33.72	168	28.05	599
Language (Medium)	Male	11	2.72	91	22.52	183	45.3	119	29.46	404
	Female	1	0.51	45	23.08	74	37.95	75	38.46	195
	Total	12	2	136	22.7	257	42.9	194	32.39	599
Social Science	Male	10	2.48	157	38.86	163	40.35	74	18.32	404
	Female	3	1.54	95	48.72	64	32.82	33	16.92	195
	Total	13	2.17	252	42.07	227	37.9	107	17.86	599

The data reveals that in Mathematics, Science and Social Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this trend was reverse in Language. Similarly, the percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than female teachers. The percentage of female teachers who studied Mathematics, Science, Language and Social Science up to secondary level was more than their counterparts. Besides, the percentage of male teachers who studied Science, Language and Social Science below Class X was more than female teachers. However, the reverse trend may be observed in Mathematics. Overall, subject wise educational qualification of males was better than female teachers in Mathematics, Science and Social Science.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
200	Male	130	262	9
	Female	72	110	8
	Total	202	372	17

Diploma/Certificate in Primary/Elementary education holder teachers were approximately 34%. Very few teachers were M.Ed degree holder. Besides, approximately, 62% teachers were B.Ed.

Availability of Teaching Aids

Various type of teaching aids available for teachers in both rural and urban was analysed. It was observed that all teaching aids were available to 85% and more to teachers in urban schools except Others. Similarly, all teaching aids were available to 79% and more teachers teaching in rural schools.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		Total No. of Teachers
1. School Complex	N	1
	%	2.94
2. Block Resource Centre	N	1
	%	2.94
3. Teacher Resource Centre	N	4
	%	11.76
4. Cluster Resource Centre	N	1
	%	2.94
5. DIET	N	6
	%	17.65
6. SCERT	N	14
	%	41.18
7. Others	N	7
	%	20.59

Maximum only 14(41.18%) of teachers were trained by SCERT followed by others (20.59%) and DIET (17.65%). However, only one teacher each was trained by School Complex, Block Resource Centre and Cluster Resource Centre respectively.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	9
2. Content Enrichment	9
3. Production of Instructional Material	1
4. Use of Instructional Material	0
5. Assessment of Pupil Learning	0
6. Competency based Teaching Learning	9
7. Activity based Joyful Learning	1
8. Others	4

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training', 'Content Enrichment' and 'Competency based Teaching-Learning, and it was followed by Others. Minimum programmes were conducted on 'Use of Instructional Material' and 'Assessment of Pupil learning'.

Out of total 599 teachers, 476(79.47%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was approximately 75% and 88% respectively. It was 100% and 98% for male and female teachers in urban areas respectively. However, percentage of female teachers in rural schools who had not attended any training programme was more than their counterparts.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	12	7	12	4
	%				
Average	N	110	114	110	115
	%				
Low	N	1	2	1	4
	%				

It is evident that approximately 89% training programmes were 'Averagely' effective in terms of utility of knowledge gained during training programmes. Only 10% programmes were considered as 'Highly' useful. However, impact of these training programmes was rated as average by 89% to 93% teachers in different subjects. Further, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by approximately 3% to 10% teachers.

Academic Assistance received from Various Sources

Information collected regarding Assistance to teachers received from various sources indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School'. It was followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 64% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0.Not Applicable	102	2.24	77	1.69
1.Illiterate	696	15.29	1581	34.72
2.Literate	228	5.00	525	11.53
3.Primary	958	21.04	1094	24.03
4.Secondary	2093	45.97	1149	25.24
5.Sr. Secondary	289	06.35	74	1.62
6.Degree and above	130	2.86	15	0.33
7.Donot Know/Cannot say	57	1.25	38	0.83

Table 14 indicates that approximately 15% father and 35% mother of the students were illiterate. Only approximately 3% father and 0.33% mother were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	199	18	217	104	8	112
Household/ Housewife	13	0	13	3561	530	4091
Farmer	1245	66	1311	75	1	76
Poultry farming	3	1	4	2	0	2
Agricultural labour	193	30	223	17	6	23
Picking forest produce	5	0	5	0	0	0
Domestic Servent	22	5	27	6	13	19
Street Vender	7	2	9	3	0	3
Manual unskilled worker	363	32	395	45	13	58
Skilled worker	628	104	732	26	15	41
Clerical worker	187	105	292	11	13	24
Shopkeeper	257	72	329	13	2	15
Employer	32	9	41	0	0	0
Manager/Senior Officer	173	38	211	33	3	36
Others	607	137	744	38	15	53

Table 15 indicates that in rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives, but fathers were clerical worker/skilled workers. Only few mothers and fathers were Manager/Senior Officer. Number of Manager/Senior Officer father and mother was more in rural areas than urban areas. Fathers' occupation in decreasing order was farmer, others, skilled work, manual unskilled work, shopkeeper, clerical work, agricultural labour work/others manager/senior officer, etc. Mothers' occupation in decreasing order was household/housewives, farmer, manual unskilled work, skilled work, clerical work and agricultural labour work etc. However, not a single mother was picking forest products or employer in both areas.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	580	630	122	142	702	772
	%	29.91	31.58	42.36	42.9	31.52	33.19
Mother	N	278	316	68	105	346	421
	%	14.34	15.84	23.61	31.72	15.54	18.1
Elder Brother/Sister	N	418	409	79	76	497	485
	%	21.56	20.5	27.43	22.96	22.32	20.85
Others	N	291	341	44	69	335	410
	%	15.01	17.09	15.28	20.85	15.04	17.63

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. Girls were getting more academic assistance from father, mother and others than boys but the trend was reverse in case of help from elder brother/sister. The descending order of academic assistance provided by the family members was father, elder brother, sisters and mothers for students.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls. However, it was almost same for both rural and urban areas. Besides, the percentage of girls attending school between 70%-80% and 80-90% of working days was more than boys. Approximately, 4% percent boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending schools more than 70% of total working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Himachal Pradesh. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

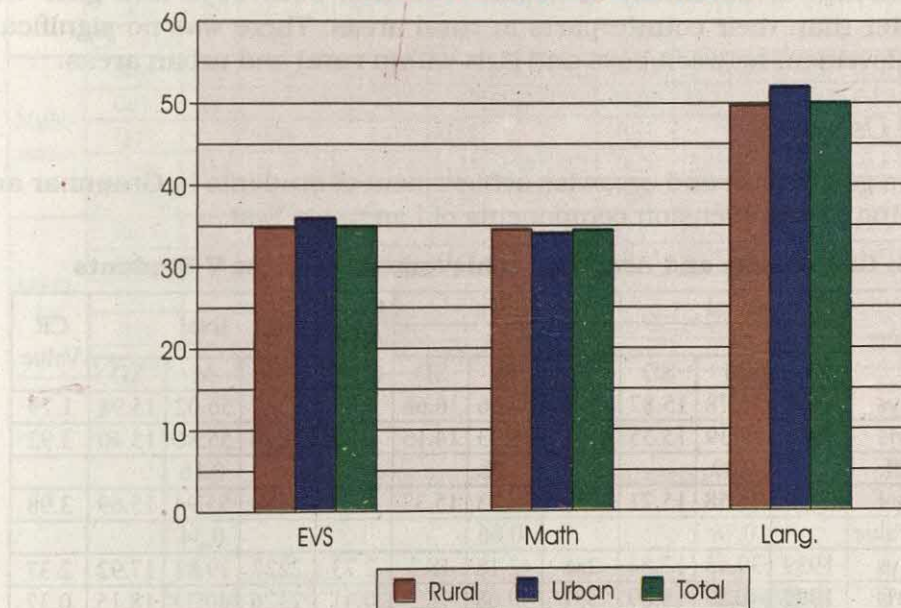
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1939	35.31	12.23	288	37.07	12.43	1.76	2227	35.53	12.26	2.25
	Girls	1995	34.26	11.89	331	34.92	10.68	0.66	2326	34.36	11.73	1.02
	Diff.		1.05			2.15				1.17		
	Total	3934	34.78	12.07	619	35.92	11.57	1.14	4553	34.93	12.01	2.27
	CR Value		2.73			2.29				3.29		
Mathe- matics	Boys	1939	34.51	13.98	288	34.48	12.18	-0.03	2227	34.51	13.76	-0.04
	Girls	1995	34.44	13.71	331	33.6	10.9	-0.84	2326	34.32	13.35	-1.25
	Diff.		0.07			0.88				0.19		
	Total	3934	34.47	13.84	619	34.01	11.51	-0.46	4553	34.41	13.55	-0.9
	CR Value		0.16			0.94				0.47		
Langu- age	Boys	1939	49.66	14.4	288	51.85	14.79	2.19	2227	49.94	14.46	2.35
	Girls	1995	49.72	14.23	331	51.96	13.5	2.24	2326	50.04	14.15	2.77
	Diff.		-0.06			-0.11				-0.1		
	Total	3934	49.69	14.31	619	51.91	14.1	2.22	4553	49.99	14.3	3.63
	CR Value		-0.13			-0.1				-0.24		

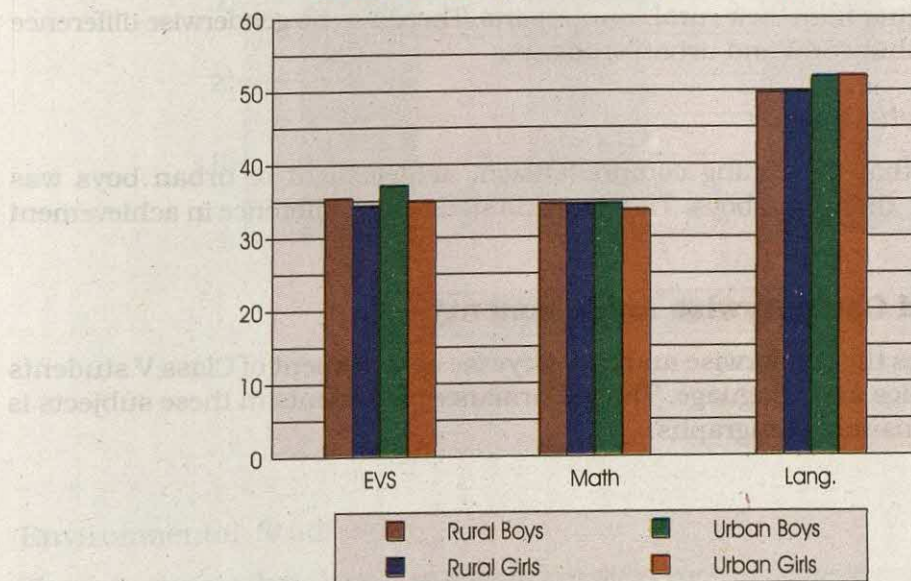
Environmental Studies

The data reveals that achievement of urban boys and total students was significantly better than their rural counterparts. Within rural and urban areas, performance of boys was significantly better than girls.

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Mathematics

The data reveals that in Mathematics, there was no significant difference in achievement of rural and urban students as well as between boys and girls within areas.

Language

The data reveals that achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. There was no significant difference in achievement between boys and girls within rural and urban areas.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Grammar & Usage	Boys	1939	55.78	15.87	288	57.66	16.66	1.87	2227	56.02	15.98	1.79
	Girls	1995	55.39	15.55	331	58.73	14.15	3.34	23.26	55.86	15.40	3.92
	Diff.		0.39			-1.08				0.16		
	Total	3934	55.58	15.71	619	58.23	15.37	2.65	4556	55.94	15.69	3.98
	CR Value		0.78			-0.86				0.34		
Compre- hension	Boys	1939	39.45	17.84	288	42.18	18.3	2.73	2227	39.81	17.92	2.37
	Girls	1995	40.27	18.09	331	40.68	18.5	0.41	2326	40.33	18.15	0.37
	Diff.		-0.82			1.5				-0.52		
	Total	3934	39.87	17.97	619	41.38	18.41	1.51	4553	40.07	18.04	1.9
	CR Value		-1.43			1.01				-0.97		

The data reveals that achievement of girls as well as total students of urban areas was significantly better than their rural counterparts. There was no genderwise difference in achievement within rural and urban students.

Reading Comprehension

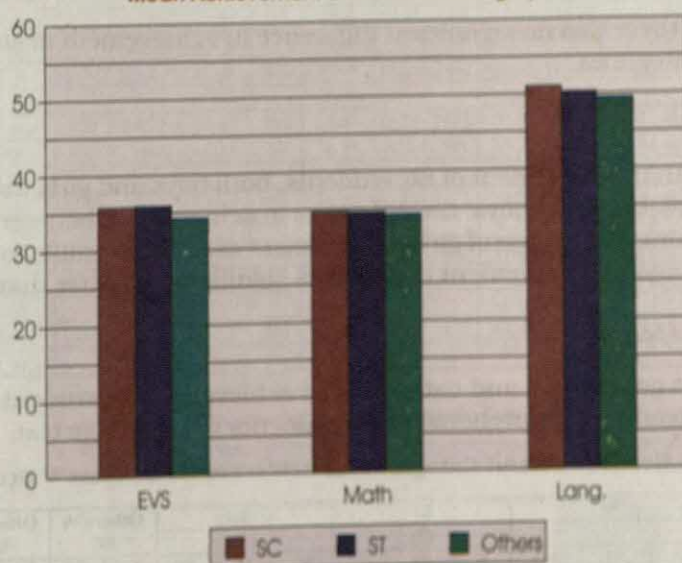
The data reveals that in reading comprehension, achievement of urban boys was significantly better than rural boys. There was no significant difference in achievement in other cases.

Genderwise and Categorywise Achievement

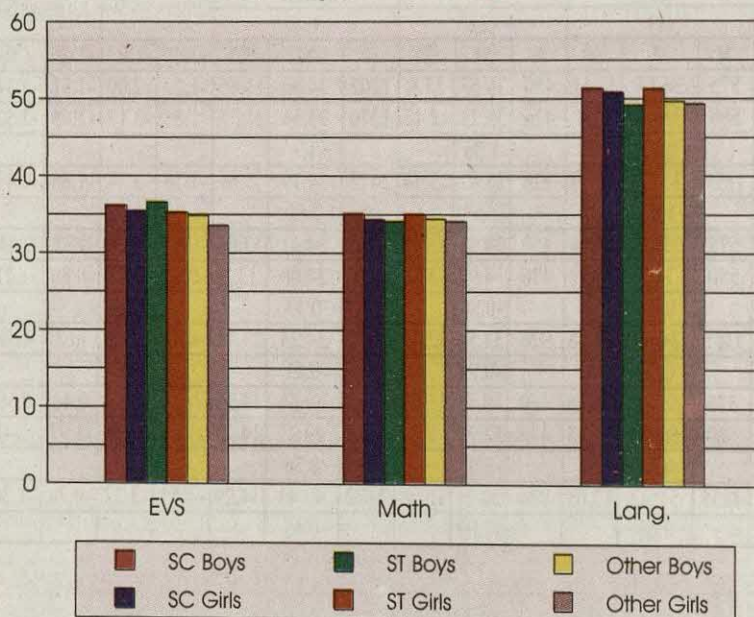
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
EVS	Boys	575	36.13	12.17	450	36.57	13.8	1202	34.86	11.65	-1.27	-2.09	-1.71	-2.34	0.44	0.53
	Girls	580	35.41	11.8	476	35.21	12.47	1270	33.56	11.35	-1.85	-3.17	-1.65	-2.52	-0.2	-0.27
	Diff.		0.72			1.36			1.3							
	Total	1155	35.77	11.99	926	35.87	13.14	2472	34.19	11.51	-1.58	-3.74	-1.68	-3.43	0.1	0.18
	CR Value		1.02			1.57			2.81							
Mathematics	Boys	575	35.04	14.48	450	34.09	13.13	1202	34.41	13.64	-0.63	-0.87	0.32	0.44	-0.95	-1.1
	Girls	580	34.3	13.27	476	34.97	13.82	1270	34.08	13.2	-0.22	-0.33	-0.89	-1.21	0.67	0.8
	Diff.		0.74			-0.88			0.33							
	Total	1155	34.67	13.88	926	34.54	13.49	2472	34.24	13.41	-0.43	-0.88	-0.3	-0.58	-0.13	-0.22
	CR Value		0.91			-0.99			0.61							
Language	Boys	575	51.26	14.16	450	49.15	15.07	1202	49.61	14.35	-1.65	-2.29	0.46	0.56	-2.11	-2.28
	Girls	580	50.78	13.13	476	51.22	15	1270	49.25	14.23	-1.53	-2.26	-1.97	-2.48	0.44	0.5
	Diff.		0.48			-2.07			0.36							
	Total	1155	51.02	13.65	926	50.21	15.06	2472	49.43	14.29	-1.59	-3.22	-0.78	-1.36	-0.81	-1.27
	CR Value		0.60			-2.09			0.63							

Mean Achievement of Students-Categorywise**Environmental Studies**

The data reveals that there was significant difference in achievement of students, both boys and girls between Others vs SC and Others vs ST favouring SC and ST students respectively. Within categories, achievement of boys in Others category was significantly better than girls in other category.

Mean Achievement of Students-Genderwise

Mathematics

In Mathematics, there was no significant difference in achievement of students across and within the categories.

Language

The data reveals that achievement of SC students, both boys and girls was significantly better than Others. In case of boys, the difference in achievement between ST vs SC was significant favouring SC. In case of girls achievement of ST was significantly better than Others. In ST category, achievement of girls was significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	575	57.75	15.11	450	55.22	17	1202	55.49	15.94	-2.26	-2.9	0.27	0.29	-2.53	-2.48
	Girls	580	57.18	13.93	476	56.49	17.02	1270	55.03	15.37	-2.15	-2.98	-1.46	-1.64	-0.69	-0.71
	Diff.		0.57			-1.27			0.46							
	Total	1155	57.46	14.53	926	55.87	17.01	2472	55.26	15.65	-2.2	-4.14	-0.61	-0.95	-1.59	-2.26
	CR Value		0.67			-1.14			0.73							
Reading Comprehe nsion	Boys	575	40.43	18.18	450	39.04	18.23	1202	39.79	17.67	-0.64	-0.7	0.75	0.75	-1.39	-1.21
	Girls	580	40.13	17.76	476	42.44	18.27	1270	39.63	18.23	-0.5	-0.56	-2.81	-2.86	2.31	2.07
	Diff.		0.3			-3.4			0.16							
	Total	1155	40.28	17.96	926	40.78	18.32	2472	39.71	17.96	-0.57	-0.89	-1.07	-1.52	0.5	0.62
	CR Value		0.28			-2.83			0.22							

The data reveals that achievement of SC students was better than ST followed by Others and the differences in achievement were significant between Others vs SC and ST vs SC. In case of boys, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. Further, achievement of SC girls was significantly better than girls of Others category. There was no genderwise differences in achievement within categories.

Reading Comprehension

The data reveals that achievement of ST girls was better than SC followed by Others and the differences in achievement were significant between Others vs ST and ST vs SC. Further, performance of ST girls was significantly better than ST boys.

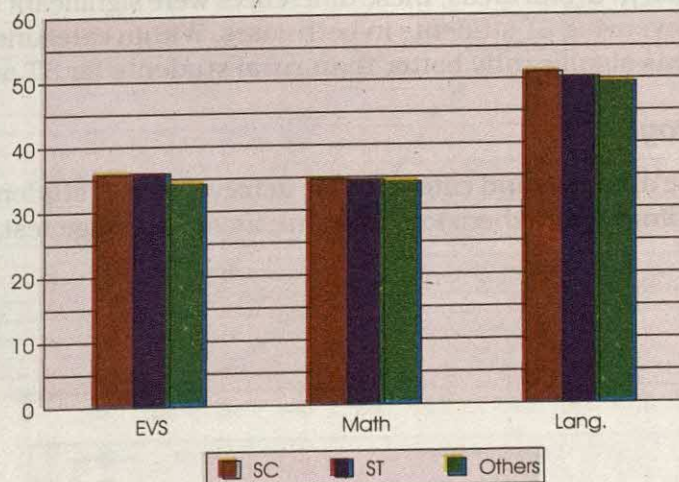
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

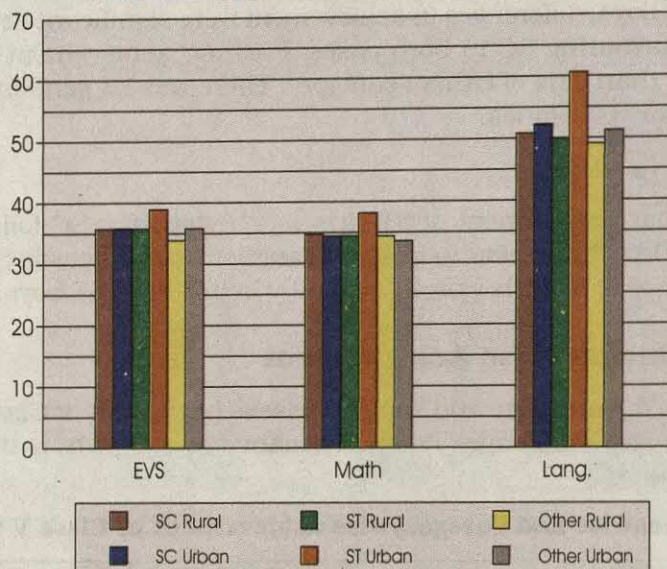
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	960	35.76	12.27	901	35.79	13.12	2073	33.89	11.42	-1.87	-3.99	-1.9	-3.77	0.03	0.05
	Urban	195	35.81	10.55	25	38.9	13.92	399	35.79	11.88	-0.02	-0.02	-3.11	-1.09	3.09	1.07
	Diff.		-0.05			-3.11			-1.9							
	Total	1155	35.77	11.99	926	35.87	13.14	2472	34.19	11.51	-1.58	-3.74	-1.68	-3.43	0.1	0.18
	CR Value		-0.06			-1.10			-2.94							
Mathematics	Rural	960	34.72	14.37	901	34.44	13.56	2073	34.37	13.72	-0.35	-0.63	-0.07	-0.13	-0.28	-0.43
	Urban	195	34.4	11.23	25	38.11	10.5	399	33.56	11.67	-0.84	-0.85	-4.55	-2.09	3.71	1.65
	Diff.		0.32			-3.67			0.81							
	Total	1155	34.67	13.88	926	34.54	13.49	2472	34.24	13.41	-0.43	-0.88	-0.3	-0.58	-0.13	-0.22
	CR Value		0.35			-1.71			1.23							
Language	Rural	960	50.78	13.77	901	49.93	15.08	2073	49.08	14.19	-1.7	-3.13	-0.85	-1.44	-0.85	-1.27
	Urban	195	52.21	13.02	25	60.6	10.34	399	51.22	14.65	-0.99	-0.83	-9.38	-4.27	8.39	3.7
	Diff.		-1.43			-10.67			-2.14							
	Total	1155	51.02	13.65	926	50.21	15.06	2472	49.43	14.29	-1.59	-3.22	-0.78	-1.36	-0.81	-1.27
	CR Value		-1.38			-5.01			-2.69							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas, differences in achievement were significant between Others vs SC and Others vs ST favouring SC and ST. In Others category, achievement of urban students was significantly better than rural students.

Mathematics

In Mathematics, differences in achievement were significant only between urban students of Others and ST favouring ST. Within categories, there was no significant difference in achievement areawise.

Language

In urban areas, difference in achievement were significant only between Others vs SC favouring SC students. In urban areas, these differences were significant between Others vs ST and ST vs SC favouring ST students in both cases. Within categories, achievement of urban students was significantly better than rural students for ST and Others.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	960	57.2	14.57	901	55.53	17.05	2073	54.85	15.56	-2.35	-4.04	-0.68	-1.03	-1.67	-2.26
	Urban	195	58.79	14.25	25	68	9.66	399	57.34	15.97	-1.45	-1.12	-10.66	-5.1	9.21	4.22
	Diff.		-1.59			-12.47			-2.49							
	Total	1155	57.46	14.53	926	55.87	17.01	2472	55.26	15.65	-2.2	-4.14	-0.61	-0.95	-1.59	-2.26
	CR Value		-1.42			-6.19			-2.86							
Reading Comprehension	Rural	960	40.08	18.03	901	40.58	18.29	2073	39.46	17.8	-0.62	-0.88	-1.12	-1.55	0.5	0.59
	Urban	195	41.23	17.65	25	48.27	17.98	399	41.02	18.75	-0.21	-0.13	-7.25	-1.95	7.04	1.85
	Diff.		-1.15			-7.69			-1.56							
	Total	1155	40.28	17.96	926	40.78	18.32	2472	39.71	17.96	-0.57	-0.89	-1.07	-1.52	0.5	0.62
	CR Value		-0.83			-2.11			-1.53							

In rural areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In urban areas, performance of SC students was significantly better than ST students. In ST and Others category, achievement of urban students were significantly better than rural students.

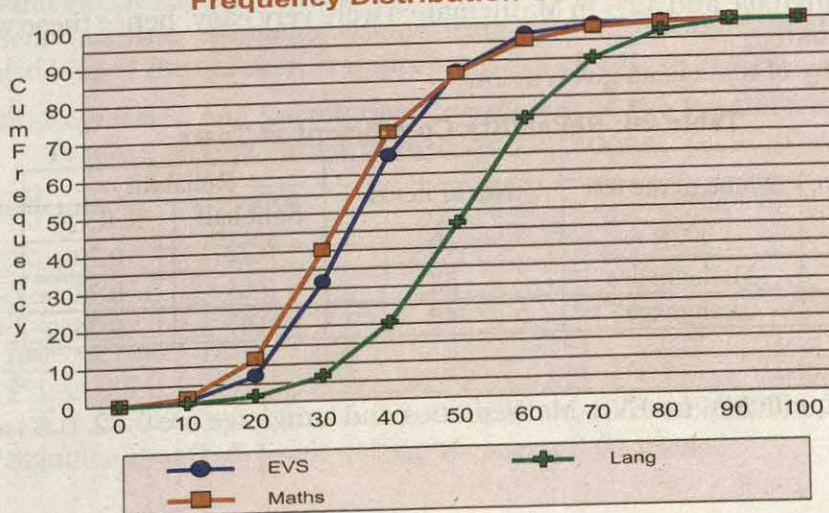
Reading Comprehension

In reading comprehension, there was significant difference in achievement of students across the categories. In ST category, achievement of urban students was significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	46	286	1118	1520	1003	446	101	26	7	0
	cf	46	332	1450	2970	3973	4419	4520	4546	4553	4553
	cf(%)	1.01	7.29	31.85	65.23	87.26	97.06	99.28	99.85	100	100
Math	f	81	456	1298	1418	695	390	146	50	15	4
	cf	17	66	222	630	1191	1262	720	330	110	5
	cf(%)	1.78	11.79	40.30	71.45	86.71	95.28	98.48	99.58	99.91	100
Language	f	17	66	222	630	1191	1262	720	330	110	5
	cf	17	83	305	935	2126	3388	4108	4438	4548	4553
	cf(%)	0.37	1.82	6.70	20.54	46.69	74.41	90.23	97.47	99.89	100

Frequency Distribution of Students

The figures posted in Table 23 revealed that in Mathematics and Language the distribution of scores covered the entire range from 0-100 percent. In EVS, distribution of scores covered the range 0-90 percent. The maximum number of cases in EVS (1520), in Mathematics (1418) and in Language (1262) were in the range 30-40 percent, 30-40 percent and 50-60 percent respectively. The 12.74 percent students in EVS, 13.29 percent in Mathematics and 53.31 percent in Language scored more than 50 percent marks whereas 2.94 percent in EVS, 4.72 percent in Mathematics and 25.59 percent in Language scored more than 60 percent marks. The achievement of students in Language was better than EVS and Mathematics.

CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	13	6	11
25 to less than 50	Difficult	18	16	18
50 to less than 75	Average	9	12	9
75 to 100	Very Easy	0	6	0

About 30% items in EVS and Mathematics and 15% items in Language were found very difficult. Nearly 40% items in each subject were difficult. However, 25% items in each subject belonged to the category of average. No item in EVS and Math and 15% items in Language was found very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	16	26	21
Less than .30	Poor Discrimination	24	14	17

No item in any subject had good D.I. i.e., more than 0.70. About 40% in EVS, 65% in Language and 62% items in Mathematics had average value of D.I. However, 60% in EVS, 35% in Language and 42% in Mathematics were very easy, hence these were very poorly discriminated.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.72	0.79
2	Mathematics	38	0.63	0.73
3	Language	40	0.67	0.76

The reliability co-efficient for EVS, Mathematics and Language are 0.72, 0.63 and 0.67 respectively.

IMPACT OF INTERVENING VARIABLES

School

Availability of competency based workbook, and ancillary facilities influence the learning achievement of children in EVS, Mathematics and Language. Availability of competency based teacher's handbook influence the learning achievement of children in EVS, Mathematics and Language respectively. The positive association of competency-based workbook and ancillary facilities like drinking water, toilet facilities etc. with the criterions and indicates that the workbook helps the children in improving their scores in EVS, Mathematic and Language, and ancillary facilities attract the children for attending the school regularly.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	44.826	--	35.359	--	61.210	--
PTR	-0.010	-0.003	-0.017	-0.017	-0.010	-0.010
Com_Participation	0.057	0.012	0.042	0.044	0.031*	0.009
Teach-aid	0.048	0.005	0.035	0.023	0.123	0.017
Physical facility	0.415	0.107	0.440	0.110	0.616	0.145*
Ancillary facility	0.469	0.142**	0.611	0.143*	0.468	0.150*
Instructional time	0.045	0.002	0.024	0.030	0.096*	0.130
Working day	0.032	0.017	0.010	0.035	0.026	0.057
Index-Comp. TLM	4.298*	0.115**	1.364*	0.019*	5.500	0.036
R²	0.066		0.030		0.090	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.6% of total variance in EVS, 3.0% in Mathematics and 9.0% in Language.

Teacher

The teaching experience, teacher's training and school organisation influence the learning achievement of children in EVS, Mathematics and Language. The positive association of teaching experience and teacher's training with the criterion indicates that long teaching experience of teachers at primary stage and more number of teacher's training programmes have helped the children in improving their learning achievement in EVS, Mathematics and Language. Helps from senior colleague in the school organisation also helped the children in improvement their scores in EVS.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	35.484	--	37.513	--	51.115	--
Index-Qualification	0.082	0.062	0.011	0.062	0.020	0.010
Index-Experience	3.883**	0.213**	3.499**	0.147**	3.813**	0.182**
Index-Teaching Aid	1.572**	0.052*	0.014	0.011	0.020	0.040
Index-School Org.	0.297*	0.059	0.062	0.011	0.214	0.040
R²	0.068		0.026		0.040	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.8% of total variance in EVS 2.6% in Mathematics and 4.0% in Language.

Pupil

The percentage attendance of children in school, educational status and occupation of parents, age of children, teaching-learning processes adopted by teachers in school and school practices and academic assistance provided by the family members influence the learning achievement of children in EVS, Mathematics and Language. The positive association of percentage attendance of children in school and school practices. Teaching learning process adopted by teachers and academic assistance provided by the family members indicates that children who attend school regularly and receive academic assistance from their family members, score high in the three subjects. The negative association with age of children indicates that children in higher age group scores poorly.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	37.116	--	42.276	--	59.895	--
Index-Ed & Occu	3.040**	0.163**	3.837**	0.198**	4.363**	0.222**
Index-Schooling	0.539**	0.022	0.316	0.083**	0.836*	0.075**
Index-TLP	0.956*	0.036*	0.195*	0.034*	0.076**	0.061*
Age	-0.585**	-0.091**	-0.883*	-0.121**	-1.391**	-0.154**
Detention	-0.432*	-0.058**	-0.241	-0.061**	-0.627**	-0.090**
Attendance	0.069**	0.148**	0.040**	0.089**	0.103**	0.189**
R²	0.052		0.050		0.094	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 5.7% of total variance in EVS, 5.0% in Mathematics and 9.4% in Language.

One can infer that the children attending school regularly, schooling practices and academic assistance provided by the family members, availability of competency-based workbook, teacher's handbook, ancillary facilities in school, teaching experience at primary stage and teacher's training help the children in improving their learning skills in EVS, Mathematics and Language.

COMPARISON OF ACHIEVEMENT BETWEEN DPEP vs NON-DPEP DISTRICTS

In Himachal Pradesh out of four districts, Chamba is the only DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	628	31.61	11.48	1599	37.08	12.22	9.93
	Girls	606	31.66	11.85	1720	35.31	11.54	6.56
	Diff.		-0.05			1.77		
	Total	1234	31.63	11.66	3319	36.16	11.9	11.59
	CR Value		-0.08			4.28		
Mathe- matics	Boys	628	30.9	14.56	1599	35.92	13.17	7.52
	Girls	606	30.48	14.02	1720	35.67	12.84	8.01
	Diff.		0.42			0.25		
	Total	1234	30.69	14.29	3319	35.79	13	10.96
	CR Value		0.52			0.55		
Language	Boys	628	44.32	13.72	1599	52.15	14.15	12.01
	Girls	606	45.83	13.78	1720	51.52	13.98	8.71
	Diff.		-1.51			0.63		
	Total	1234	45.06	13.76	3319	51.82	14.07	14.64
	CR Value		-1.93			1.29		

The data reveals that in all the three subjects, the achievement of students of non-DPEP districts was significantly better than students of Chamba which is a DPEP district.

HARD SPOT OF LEARNING

In EVS, 13(32.5%) of items were correctly responded to by less than 25% of students, thus, found very difficult. Likewise, 18(45%) of items were correctly responded to by less than 50% of students and found difficult. Contentwise, the hard spots in learning in EVS was identified in identification of a state on the map, identification of boundaries with neighbouring countries, representative of a president in a state, system of governance in India, knowledge of postal services, knowledge of UN days, farmer's role in freedom struggle, knowledge of solar system, planets, etc., knowledge of pollution free fuel, knowledge of soil erosion, identification of simple machine, conservation of wild animals, identification of natural features of the country, location of a state, understanding a longitude and a latitude, identification of poles, judicial functions of courts, recognition of first president of India, knowledge of pre-British rule, understanding of eclipse, etc.

In Language, 6(15%) items were correctly responded to by less than 25% students and 16 (40%) items were correctly responded to by less than 50% of students and found very difficult and difficult respectively. Contentwise, the hard spots were identified in structure, vocabulary, comprehension of instructions, comprehension of time table, comprehension of story and informatinal passage.

In Mathematics, 11(30%) items were correctly responded by less than 25% of students and found very difficult. Similarly, 18 (47%) items were correctly responded to by less than 50% of students and found very difficult. Contentwise, the hard spots in learning was identified as commercial mathematics, geometry, fraction, decimals, number system, LCM, HCF and measurement/area etc.

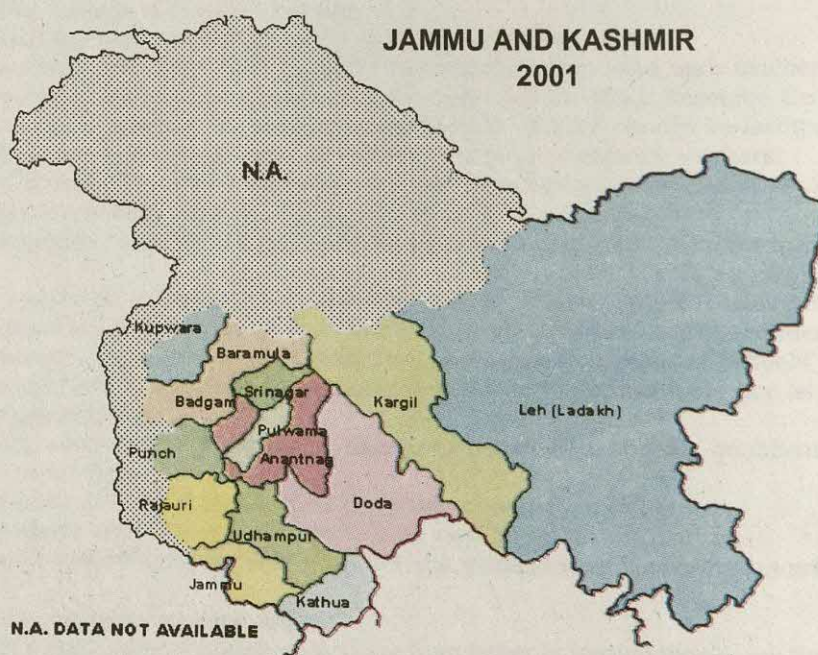
FINDINGS

- Musical instruments were available approximately 1/10th schools.
- Computer was available in very few schools.
- Teaching Aids were available for primary classes in only one school in 2001. However, textbooks, workbooks and teachers' handbooks were not available at all.
- Students were getting more benefit under Free textbooks incentive scheme as compared to rest of the incentive schemes implemented in the state.
- Average number of working days in schools was approximately 226.
- Almost all schools in rural areas were having Village Education Committees.
- AEC and SMC were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools. This trend was reverse in rural schools.
- More female teachers should be encouraged to serve in rural areas in order to enhance the performance of rural girls.
- Average number of teachers in urban schools was higher than in rural schools.
- Teacher-pupil ratio was higher in rural schools than urban schools.
- Percentage of female teachers holding PG degree was more than their counterparts male teachers.
- Very few teachers were having below Class X level Educational Qualification
- Degree holder male teachers were more in Mathematics, Science and Social Science than female teachers.
- Very few teachers was M.Ed. degree holders.
- Majority of teaching aids were available in more than 90% teachers.
- In general, teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by Block Resource Centre and minimum programmes were conducted by SCERT. SCERT should be facilitated given enough funds by the state Govt. to run training programmes for teachers.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Majority of teachers have not attended any in-service training programme during last three years.
- Not a single teacher in urban areas attended training programme. More teachers from urban areas need to be trained in order to improve the performance of urban students.
- In most of cases teachers were getting maximum assistance from Head of Schools.
- For approximately 2/3rd students medium of instruction in the school was same as the language spoken at home.
- Fathers having educational qualification degree or higher educational qualification were more than mothers.
- In general educational qualification of mothers was poorer than father.
- Majority of mothers were housewives and fathers were farmer in rural areas.
- Maximum number of fathers were skilled worker and mothers were housewives in urban areas.
- No mother was employer in urban areas.
- Students were getting more academic assistance from father/guardian than other family members.
- Girls were getting more academic assistance from father, mother and others than boys.
- Approximately, 87% students were attending schools on above 70% of total working days.
- Approximately less than 4% students were attending schools below 60% of the total working days.
- Achievement of rural and urban boys were significantly better than girls in EVS.
- In Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of SC category was better than Others and ST students.

- In urban areas, performance of students of each category was better than their rural counterparts in EVS and Language only.
- Availability of competency based workbook, teacher's handbook and ancillary facilities in schools help the children in improving their learning skills in the three subjects.
- Teaching experience of teachers at primary stage and teacher's training have helped the children in improving their learning skills in the three subjects. However, higher qualification of teachers did not help the children in improving their learning skills in EVS and Mathematics.
- Attending school regularly, schooling practices and academic assistance provided by the family members help the children in improving their learning skills in the three subjects. However, children of higher educated parents and those in higher age group scores poorly.
- Performance of students from non DPEP districts were significantly better than students of DPEP districts in all three subjects.

INTRODUCTION

There are 14 districts in the state. The state has districtwise three regions i.e., Jammu, Srinagar and Leh. In the state primary in upto class V, middle till class VIII and senior secondary upto class XIII.

**SAMPLE**

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total, 100 schools were sampled from Jammu and Leh districts of Jammu and Kashmir State. Out of total sampled schools, 50 schools were from Jammu and 50 from Leh district.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	82	82	100	0	0	0	0
Urban	18	18	100	0	0	0	0
Total	100	100	100	0	0	0	0

Teachers

A total of 286 teachers were sampled from 100 sampled schools. Out of 286 teachers, 199 were male teachers and 167 were female teachers. Areawise, 232 teachers were from rural areas and 54 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Categorywise and Genderwise Distribution of Teachers										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	13	12.38	41	39.05	6	5.71	45	42.86	105
	Female	5	3.94	61	48.03	3	2.36	58	45.67	127
	Total	18	7.76	102	43.97	9	3.88	103	44.4	232
Urban	Male	0	0	6	42.86	0	0	8	57.14	14
	Female	1	2.5	14	35	1	2.5	24	60	40
	Total	1	1.85	20	37.04	1	1.85	32	59.26	54
Total	Male	13	10.92	47	39.5	6	5.04	53	44.54	119
	Female	6	3.59	75	44.91	4	2.4	82	49.1	167
	Total	19	6.64	122	42.66	10	3.5	135	47.2	286

Table 2 shows that the percentage of female teachers was higher than male teachers in case of ST and Other categories. However, not a single male Scheduled Caste and OBC teacher figured in the urban areas.

Students

A total number of 1,247 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Jammu	Rural	208	291	499
	Urban	43	76	119
	Total	251	367	618
Leh	Rural	235	238	473
	Urban	72	84	156
	Total	307	322	629
Total	Rural	443	529	972
	Urban	115	160	275
	Total	558	689	1247

Out of 1,247 students, 972 students were from rural areas and remaining 275 students were from urban areas. Out of the total sample, 558 were boys and 689 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes		Terminal Stage of School					
			Primary		Elementary		Secondary	
	N	%	N	%	N	%	N	%
Rural	0	0	3	3.66	42	51.22	37	45.12
Urban	0	0	0	0.00	9	50	7	38.89
Total	0	0	3	3.00	51	51	44	44

Approximately, 4% sampled schools in rural areas were primary schools. The percentage of elementary schools in the sampled schools was approximately 51% and 50% respectively for rural and urban areas. However, 44% schools having secondary classes were included in the sample. Further, not a single school having pre-primary classes could be included in the survey.

Facilities related to teaching-learning process

It was observed that maps, charts and globes were available in more than 90% schools. Magazines, journals and newspapers were available in 51% schools. Reference books, dictionaries, encyclopedia were available in 80% to 84% schools. Besides, maths kit and play material and toys were available in 60% to 69% schools. However, mini tool kit was available in only 36% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chalk and duster and chairs for teachers were available in 90% and more schools. Whereas, tables for teachers, and play ground were available in 56% to 57% schools. However, musical instruments were available in only 32% schools. Further, dustbin, pin-up board/notice board and water pitcher, ladel and glasses were available in 61% and 67% schools.

Ancillary Facilities

Computer and TV facilities were available only 3-6% schools. Annual medical check-up for children, first aid kit and immunisation facilities were available in 31% and 38% schools. Besides, toilet facilities and safe drinking water were available in 64% to 65% schools. However, separate toilet for girls and electric connection facilities were available in 47% schools.

Competency based Teaching Materials

Information gathered shows that, out of 100 schools, competency based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Teachers' handbook and workbooks were available in lesser number of schools as compared with teaching aids. However, teachers' handbooks were available in 20 schools.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	16	80	38	50	1	2	8	78	63	210
	%	25.40	38.10	60.32	23.81	1.59	0.95	12.70	37.14	100	100
Free uniform	N	425	600	325	303	139	84	322	218	1211	1205
	%	35.09	49.79	26.84	25.15	11.48	6.97	26.59	18.09	100	100
Free textbooks	N	305	401	377	340	84	62	205	134	971	937
	%	31.41	41.21	38.83	34.94	8.65	6.37	21.11	13.77	100	100
Scholarship for regular attendance	N	434	708	741	1283	104	123	21	114	1300	2228
	%	33.38	31.78	57.00	57.59	8.00	5.52	1.62	5.12	100	100
Other Schemes	N	83	125	120	325	1	2	1	13	205	465
	%	40.49	26.88	58.54	59.89	0.49	0.43	0.49	2.80	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, both boys and girls from SC and ST categories were more benefited. However, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls from SC and ST categories.

Instructional Time

Average number of working days in schools was approximately 203 days on an average, schools were having 7 periods in a day of approximately of 41 minutes duration. Further, maximum number of working days were in Jammu i.e., 208 days.

Educational Committees

The data given in the Table 6 reveals that out of total 100 schools, 78(78%) schools were having Village Education Committee (VEC). Area Education Committee (AEC) was observed in 24(24%) schools and School Management Committee (SMC) was observed in 43(43%) schools. The Parent Teacher Association (PTA) was observed in 36 (36%) schools. Further, VEC, AEC, SMC and PTA were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	72	6	78
	%	87.8	33.33	78
AEC	N	19	5	24
	%	23.17	27.78	24
SMC	N	29	14	43
	%	35.37	77.78	43
PTA	N	25	11	36
	%	30.49	61.11	36

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	82	210	39.33	324	60.67	534	7	12
Urban	18	50	21.93	178	78.07	228	13	15
Total	100	260	34.12	502	65.88	762	8	13

Table 7 shows that overall number of male teachers were just double than male teachers. Further, number of female teachers in urban schools, was more than male teachers. The average number of teachers per school in rural and urban areas was 7 and 13 respectively. Further, average pupil teacher ratio in rural schools was 12:1, however, this ratio was 15:1 approximately in urban schools.

Educational Qualification

The percentage of male teachers holding PG degree was more than female teachers. The same trend was observed for teachers holding higher secondary certificate and graduation degree. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. Besides, only less than 1% teachers were having educational qualification below Class X level.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	1	0.84	27	22.69	19	15.97	40	33.61	32	26.89	119
Female	1	0.6	64	38.32	19	11.38	41	24.55	42	25.15	167
Total	2	0.7	91	31.82	38	13.29	81	28.32	74	25.87	286

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied Mathematics, Science, Language and Social Sciences

Table 9: The Level upto which various Subjects Studied

Subjects	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	17	14.29	54	45.38	17	14.29	31	26.05	119
	Female	18	10.78	124	74.25	19	11.38	6	3.59	167
	Total	35	12.24	178	62.24	36	12.59	37	12.94	286
Science	Male	32	26.89	43	36.13	14	11.76	30	25.21	119
	Female	48	28.74	79	47.31	19	11.38	21	12.57	167
	Total	80	27.97	122	42.66	33	11.54	51	17.83	286
Language (Medium)	Male	18	15.13	48	40.34	19	15.97	34	28.57	119
	Female	19	11.38	73	43.71	16	9.58	59	35.33	167
	Total	37	12.94	121	42.31	35	12.24	93	32.52	286
Social Science	Male	15	12.61	72	60.5	14	11.76	18	15.13	119
	Female	17	10.18	120	71.86	13	7.78	17	10.18	167
	Total	32	11.19	192	67.13	27	9.44	35	12.24	286

The data reveals that in Mathematics, Language and Social Science the percentage of male teachers who studied these subject upto Sr. Secondary level or upto degree level was more than female teachers. However, this trend was reverse in Language degree holders. Similarly, the percentage of female teachers who studied Mathematics, Science and Social Science upto higher secondary level was more than male teachers. The percentage of female teachers studied Mathematics, Science and Language up to secondary level was more than their counter parts. Besides, the percentage of male teachers who studied Mathematics, Language and Social Science below Class X was more than female teachers. However, the reverse trend may be observed in Science.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
100	Male	46	41	7
	Female	84	58	6
	Total	130	99	13

Approximately 45% of the sampled teachers were diploma/certificate in Primary/Elementary Education holders and very few male teachers were M.Ed. degree holder. Besides, approximately, 1/3rd female teacher were B.Ed.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban schools. The teaching aids were available to 85% and more teachers in urban schools except Others. Similarly, all teaching aids were available to 75% and more teachers teaching in rural schools. However, teachers guide, dictionary, books other than textbooks, maps, globes and charts were available to more than 90% teachers in rural areas.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		Total No. of Teachers
1. School Complex	N	1
	%	0.35
2. Block Resource Centre	N	1
	%	0.35
3. Teacher Resource Centre	N	0
	%	0
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	95
	%	33.22
6. SIE	N	7
	%	2.45
7. Others	N	28
	%	9.79

Data portrays that the in-service teachers were trained in the districts during last three years. Moreover, DIET trained approximately 72% of the teachers and it was followed by Others (21%) and SIE (5%) of teachers were trained.

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training' followed by 'Activity based Joyful Learning'. Minimum programmes were conducted on 'Use of Instructional Material'. But not a single programme was conducted on Assessment of Pupil learning.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	39
2. Content Enrichment	24
3. Production of Instructional Material	4
4. Use of Instructional Material	3
5. Assessment of Pupil Learning	0
6. Competency based Teaching Learning	13
7. Activity based Joyful Learning	36
8. Others	36

In the state various organisations organised in-service training programmes but it has observed that out of total 286 teachers, 156(55%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 56% and 53%. However, percentage of female teachers in urban schools and male teacher in rural schools was more than their counterparts in the respective areas, who have not attended any in-service programme during last three years.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	27	21	29	13
	%	20.77	16.15	22.31	10.00
Average	N	100	103	98	110
	%	76.92	79.23	75.38	84.62
Low	N	3	6	3	7
	%	2.31	4.62	2.31	5.38

It is evident that approximately 77% training programmes were averagely effective in terms of utility of knowledge gained during the programmes. Only 21% programmes were considered as 'Highly' useful. However, impact of these training programmes was rated as Average by 75% to 85% teachers in different subjects. Besides, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 10% to 22% teachers.

Academic Assistance received from various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 17% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	25	2.00	20	1.60
1. Illiterate	260	20.85	726	58.22
2. Literate	132	10.59	85	6.82
3. Primary	211	16.92	140	11.23
4. Secondary	504	40.42	239	19.17
5. Sr. Secondary	71	5.69	17	1.36
6. Degree and above	22	1.76	3	2.41
7. Donot Know/ Cannot say	22	1.76	17	1.36

Table 14 indicates that approximately 21% fathers and 58% mothers of the students were illiterate. Only approximately 2% fathers and mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers. In general, educational qualification of mother was poorer than father.

Occupation of parents

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	33	10	43	16	3	19
Household/ Housewife	5	1	6	843	192	1035
Farmer	252	17	269	66	5	71
Poultry farming	12	1	13	0	3	3
Agricultural labour	63	9	72	1	2	3
Picking forest produce	1	0	1	0	0	0
Domestic Servent	7	0	7	4	7	11
Street Vender	15	4	19	0	0	0
Manual unskilled worker	110	14	124	6	1	7
Skilled worker	136	58	194	5	7	12
Clerical worker	17	13	30	1	8	9
Shopkeeper	56	29	85	4	6	10
Employer	162	43	205	9	16	25
Manager/Senior Officer	43	21	64	2	8	10
Others	60	55	115	15	17	32

In rural areas, maximum number of mothers were housewives and fathers were farmers. Likewise, in urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mothers were working as poultry farmer, agricultural labour, manual unskilled worker, clerical worker and manager/senior officers. Number of Manager/Senior Officer father more than mothers both in rural and urban areas. In decreasing order fathers working as farmer, employer, skilled worker, manual unskilled worker, others, shopkeepers, agricultural labour and manager/senior officer etc. Mothers, were working in decreasing order as household/housewives, farmer, others, employer, skilled worker, domestic servant, shopkeepers, Manager/Senior Officer etc. However, not a single mother was involved in picking forest produces.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	198	272	32	47	230	319
	%	44.7	51.42	27.83	29.38	41.22	46.3
Mother	N	122	148	15	34	137	182
	%	27.54	27.98	13.04	21.25	24.55	26.42
Elder Brother/Sister	N	198	241	36	60	234	301
	%	44.7	45.56	31.3	37.5	41.94	43.69
Other Family members	N	87	89	24	18	111	107
	%	19.64	16.82	20.87	11.25	19.89	15.53

Girls in rural, as well as overall were getting more help from father/guardian than any other. However, in urban areas girls were getting more academic assistance from elder brother/sister than others. Boys were getting maximum academic assistance from father/guardian/elder brother/sister in rural and elder brother/sisters in urban areas. Overall boys were getting maximum assistance equally from fathers/guardian and elder brother and sisters. In general, girls were getting academic assistance more than boys from all family members.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. The similar trend was also observed for 80-90% and 70-80% attendance. Less than 2% boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending schools more than 70% of working days.

STUDENTS ACHIEVEMENT

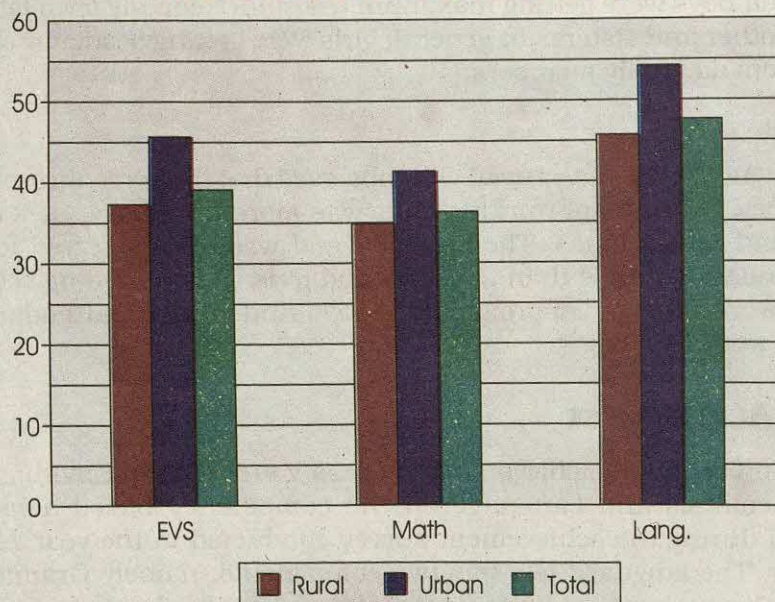
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Jammu and Kashmir. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

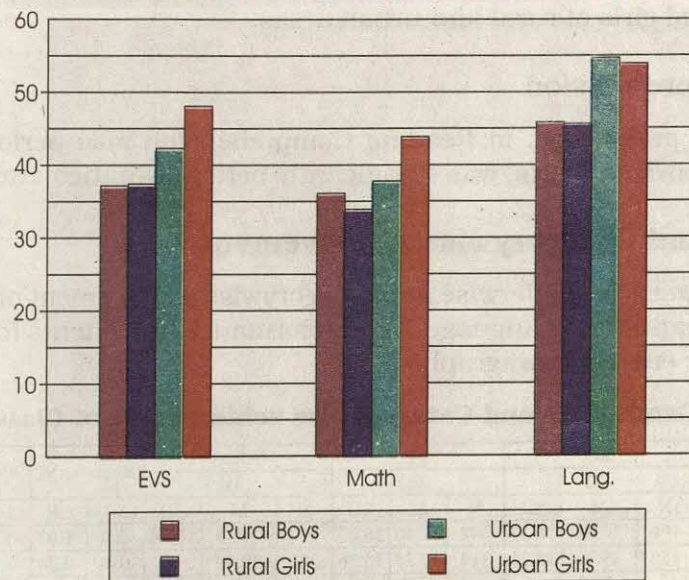
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	443	37.17	16.51	115	42.28	17.92	5.11	558	38.22	16.92	2.77
	Girls	529	37.41	17.17	160	48.08	17.02	10.67	689	39.89	17.71	6.93
	Diff.		-0.24			-5.8				-1.67		
	Total	972	37.3	16.87	275	45.65	17.6	8.35	1247	39.14	17.37	7.01
	CR Value		-0.22			-2.7				-1.7		
Mathe- matics	Boys	443	36.09	17.35	115	37.78	13.51	1.69	558	36.44	16.63	1.12
	Girls	529	33.87	16.25	160	43.88	14.29	10.01	689	36.19	16.37	7.51
	Diff.		2.22			-6.1				0.25		
	Total	972	34.88	16.79	275	41.33	14.27	6.45	1247	36.3	16.48	6.35
	CR Value		2.04			-3.6				0.27		
Langu-age	Boys	443	45.82	15.34	115	54.67	15.55	8.85	558	47.65	15.78	5.45
	Girls	529	45.61	16.34	160	53.89	17.09	8.28	689	47.54	16.87	5.42
	Diff.		0.21			0.78				0.11		
	Total	972	45.71	15.88	275	54.22	16.44	8.51	1247	47.59	16.38	7.64
	CR Value		0.21			0.39				0.12		

Mean Achievement of Students-Areawise

Environmental Studies

The data reveals that achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. Performance of urban girls was significantly better than urban boys.

Mean Achievement of Students-Genderwise

Mathematics

In Mathematics, achievement of urban students as well as urban girls was significantly better than their rural counterparts. In rural areas, achievement of boys was significantly better than girls whereas in urban areas, girls performed significantly better than boys.

Language

The data reveals that achievement of urban students, both boys and girls, was significantly better than their rural counterparts. There was no significant difference between boys and girls both in rural and urban areas.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	443	48.46	16.85	115	58.37	15.7	9.91	558	50.5	17.08	5.94
	Girls	529	48.34	16.71	160	58.88	18.08	10.54	689	50.79	17.6	6.57
	Diff.		0.12			-0.51				-0.29		
	Total	972	48.4	16.77	275	58.66	17.1	10.26	1247	50.66	17.36	8.82
	CR Value		0.11			-0.25				-0.29		
Compre- hension	Boys	443	41.43	18.9	115	48.52	20.36	7.09	558	42.89	19.4	3.38
	Girls	529	41.07	20.44	160	45.58	20.38	4.51	689	42.12	20.5	2.45
	Diff.		0.36			2.94				0.77		
	Total	972	41.23	19.74	275	46.81	20.39	5.58	1247	42.46	20.01	4.03
	CR Value		0.28			1.18				0.68		

The data reveals that achievement of urban students, both boys and girls, was significantly better than their rural counterparts. There was no significant difference between boys and girls of rural and urban areas.

Reading Comprehension

As in Grammar and Usage, in Reading Comprehension also performance of urban students, both boys and girls, was significantly better than their rural counterparts.

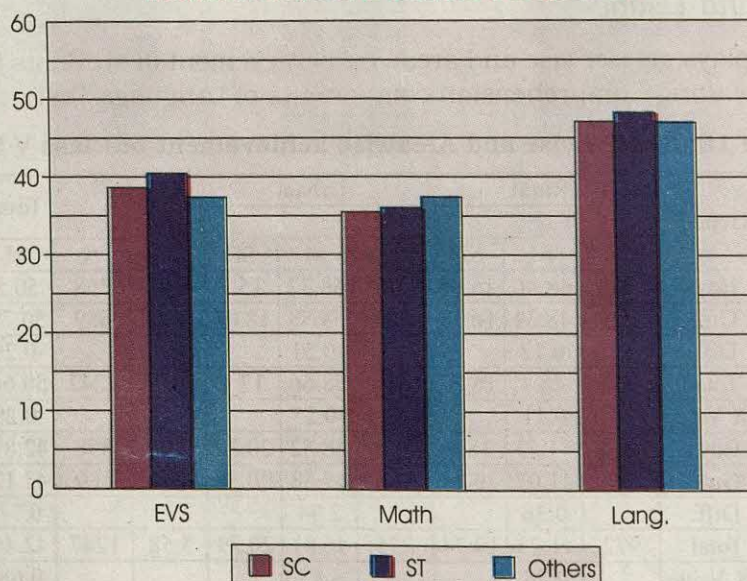
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

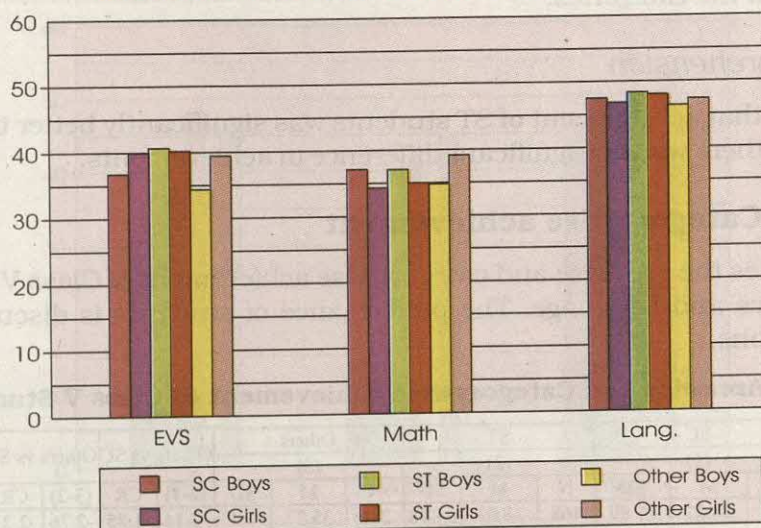
Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	106	36.75	18.37	302	40.66	16.05	150	34.35	16.84	-2.4	-1.07	-6.31	-3.81	3.91	1.95
	Girls	153	39.92	20.21	314	40.21	15.36	222	39.43	19	-0.49	-0.24	-0.78	-0.51	0.29	0.16
	Diff.		-3.17			0.45			-5.08							
	Total	259	38.62	19.5	616	40.43	15.69	372	37.38	18.31	-1.24	-0.81	-3.05	-2.67	1.81	1.32
	CR Value		-1.31			0.36			-2.71							
Mathematics	Boys	106	37.12	19.62	302	37.03	15.03	150	34.79	17.4	-2.33	-0.98	-2.24	-1.35	-0.09	-0.04
	Girls	153	34.31	17.74	314	35.02	13.67	222	39.14	18.43	4.83	2.55	4.12	2.83	0.71	0.44
	Diff.		2.81			2.01			-4.35							
	Total	259	35.46	18.54	616	36.00	14.38	372	37.39	18.12	1.93	1.3	1.39	1.26	0.54	0.42
	CR Value		1.18			1.73			-2.31							
Language	Boys	106	47.48	16.67	302	48.34	14.14	150	46.37	18.12	-1.11	-0.51	-1.97	-1.17	0.86	0.47
	Girls	153	46.8	18.93	314	48.04	13.71	222	47.33	19.3	0.53	0.26	-0.71	-0.47	1.24	0.72
	Diff.		0.68			0.3			-0.96							
	Total	259	47.08	18.01	616	48.19	13.91	372	46.94	18.81	-0.14	-0.09	-1.25	-1.11	1.11	0.89
	CR Value		0.31			0.27			-0.49							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that achievement of ST students was better than Others and the differences in achievement were significant between boys as well as total students. In Other category, performance of girls was significantly better than boys.

Mathematics

The data reveals that achievement of girls of Others category was better than ST girls followed by SC girls and the differences in achievement were significantly better between Others vs SC and Others vs ST. In Others category, achievement of girls was significantly better than boys.

Language

In Language, there was no significant difference in achievement of boys and girls across and within the categories.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Boys	106	50.04	17.86	302	51.26	15.46	150	49.31	19.52	-0.73	-0.31	-1.95	-1.07	1.22	0.63
	Girls	153	50.35	20.31	314	50.55	14.18	222	51.42	19.88	1.07	0.51	0.87	0.56	0.2	0.11
	Diff.		-0.31			0.71			-2.11							
	Total	259	50.22	19.31	616	50.9	14.81	372	50.57	19.73	0.35	0.22	-0.33	-0.28	0.68	0.51
	CR Value		-0.13			0.59			-1.02							
Reading Comprehension	Boys	106	43.21	22.18	302	43.49	17.77	150	41.47	20.48	-1.74	-0.64	-2.02	-1.03	0.28	0.12
	Girls	153	40.87	21.33	314	43.86	18.17	222	40.51	22.8	-0.36	-0.16	-3.35	-1.82	2.99	1.49
	Diff.		2.34			-0.37			0.96							
	Total	259	41.83	21.67	616	43.68	17.96	372	40.9	21.87	-0.93	-0.53	-2.78	-2.07	1.85	1.21
	CR Value		0.85			-0.26			0.42							

The data reveals that there was no significant difference in achievement of students across and within the categories.

Reading Comprehension

The data reveals that achievement of ST students was significantly better than Others. In Others cases, there was no significant difference in achievements.

Areawise and Categorywise achievement

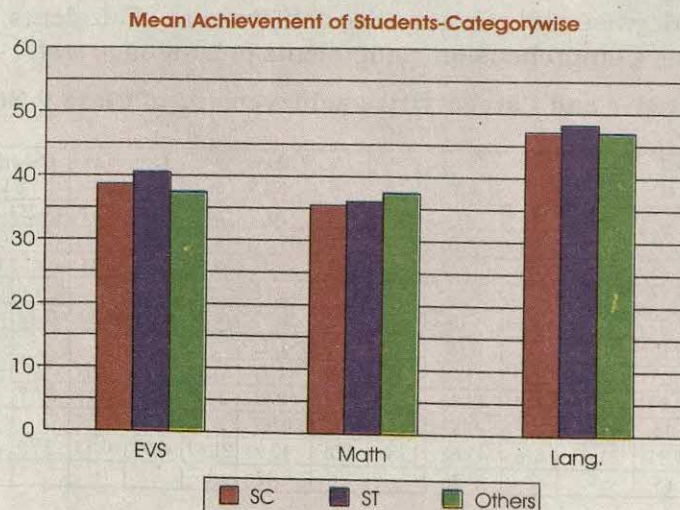
Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

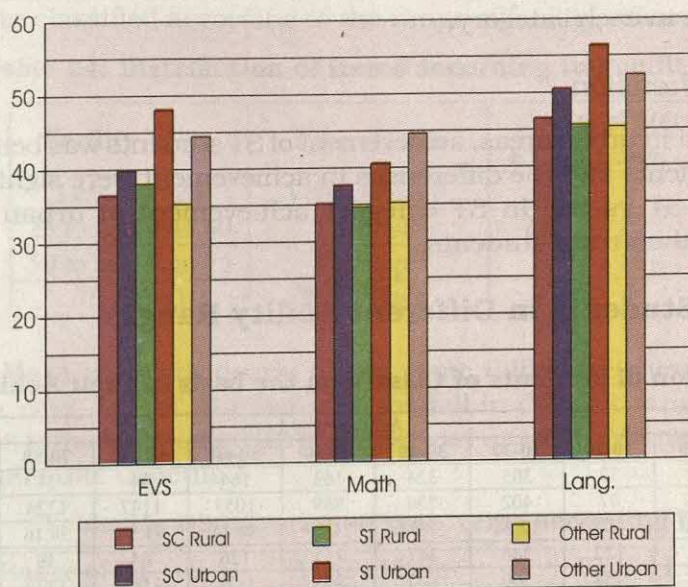
Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	218	38.41	19.89	468	38.03	14.78	286	35.27	17.43	-3.14	-1.85	-2.76	-2.23	-0.38	-0.25
	Urban	41	39.76	17.47	148	48.02	16.1	86	44.39	19.47	4.63	1.34	-3.63	-1.46	8.26	2.72
	Diff.		-1.35			-9.99			-9.12							
	Total	259	38.62	19.5	616	40.43	15.69	372	37.38	18.31	-1.24	-0.81	-3.05	-2.67	1.81	1.32
	CR Value		-0.44			-6.71			-3.90							
Mathematics	Rural	218	35.07	18.96	468	34.59	14.54	286	35.22	18.43	0.15	0.09	0.63	0.49	-0.48	-0.33
	Urban	41	37.55	16.19	148	40.49	12.91	86	44.58	15.03	7.03	2.34	4.09	2.11	2.94	1.07
	Diff.		-2.48			-5.9			-9.36							
	Total	259	35.46	18.54	616	36.00	14.38	372	37.39	18.12	1.93	1.3	1.39	1.26	0.54	0.42
	CR Value		-0.88			-4.70			-4.79							
Language	Rural	218	46.44	18.26	468	45.61	12.73	286	45.31	18.42	-1.13	-0.69	-0.3	-0.24	-0.83	-0.61
	Urban	41	50.43	16.42	148	56.35	14.37	86	52.35	19.19	1.92	0.58	-4	-1.68	5.92	2.1
	Diff.		-3.99			-10.74			-7.04							
	Total	259	47.08	18.01	616	48.19	13.91	372	46.94	18.81	-0.14	-0.09	-1.25	-1.11	1.11	0.89
	CR Value		-1.40			-8.14			-3.01							

Environmental Studies

The data reveals that in rural areas, achievement of ST students was significantly better than Others. In urban areas achievement of ST students was significantly better than SC students. Within categories, achievement of urban students was better than rural students and the differences in achievement were significant in ST and Others categories.



Mean Achievement of Students-Areawise



Mathematics

The data reveals that in urban areas, the achievement of Others was better than ST followed by SC students and the differences in achievement were significant between Others vs SC and Others vs ST. In SC and Others categories, achievement of urban students was significantly better than rural students.

Language

The data reveals that there was no significant difference in achievement of students across the categories. In ST and Others categories, performance of urban students was significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	218	48.84	19.3	468	48.34	13.64	286	48.14	19.21	-0.7	-0.4	-0.2	-0.15	-0.5	-0.34
	Urban	41	57.56	17.82	148	58.97	15.5	86	58.65	19.41	1.09	0.31	-0.32	-0.13	1.41	0.46
	Diff.		-8.72			-10.63			-10.51							
	Total	259	50.22	19.31	616	50.9	14.81	372	50.57	19.73	0.35	0.22	-0.33	-0.28	0.68	0.51
	CR Value		-2.84			-7.48			-4.41							
Reading Comprehension	Rural	218	42.45	22.22	468	41.05	17.28	286	40.61	21.47	-1.84	-0.93	-0.44	-0.29	-1.4	-0.82
	Urban	41	38.54	18.35	148	51.98	17.59	86	41.86	23.27	3.32	0.87	-10.12	-3.49	13.44	4.19
	Diff.		3.91			-10.93			-1.25							
	Total	259	41.83	21.67	616	43.68	17.96	372	40.9	21.87	-0.93	-0.53	-2.78	-2.07	1.85	1.21
	CR Value		1.21			-6.62			-0.44							

The data reveals that there was no significant difference in achievement of students across the categories. Within categories, achievement of urban students was better than rural students in each category.

Reading Comprehension

The data reveals that in urban areas, achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs ST and ST vs SC. In ST category achievement of urban students was significantly better than rural students.

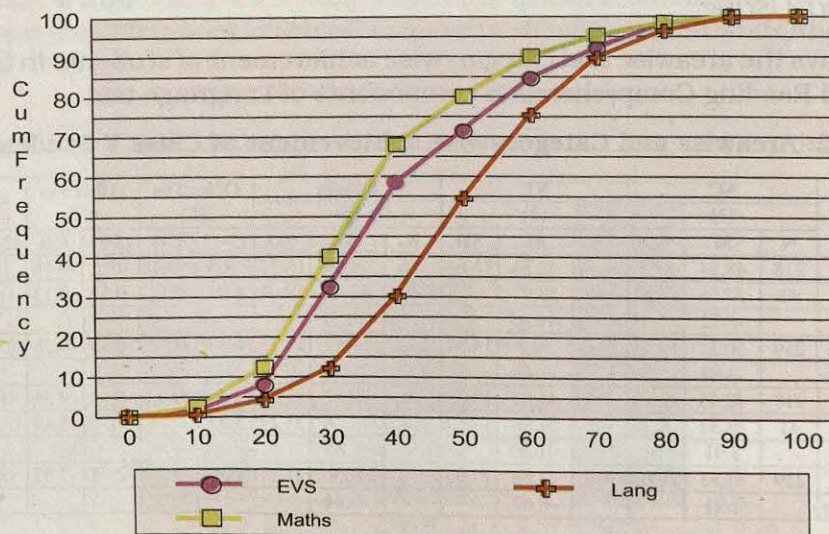
Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	15	82	305	324	163	164	94	77	23	0
	cf	15	97	402	726	889	1053	1147	1224	1247	1247
	cf(%)	1.20	7.78	32.24	58.22	71.29	84.44	91.98	98.16	100	100
Math	f	32	122	346	347	151	126	64	40	18	1
	cf	32	154	500	847	998	1124	1188	1228	1246	1247
	cf(%)	2.57	12.35	40.10	67.92	80.03	90.14	95.27	98.48	99.92	100
Language	f	5	46	99	225	304	260	178	84	41	5
	cf	5	51	150	375	679	939	1117	1201	1242	1247
	cf(%)	0.40	4.09	12.03	30.07	54.45	75.30	89.57	96.31	99.60	100

The figures posted in Table 23 reveals that in Mathematics and Language the distribution of scores covered the entire range from 0-100 percent. In EVS, distribution of scores covered the range 0-100 percent whereas in EVS, none of the students were in the range 90-100 percent. The maximum number of cases in EVS (324), in Mathematics (347) and in Language (304) were in the range 30-40 percent and 40-50 percent respectively. The 28.17% students in EVS, 19.97% in Mathematics and 45.55% in Language scored more than 50% marks whereas 15.56% in EVS, 9.86% in Mathematics and 24.70% in Language scored more than 60% marks.

Frequency Distribution of Students



CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	6	2	7
25 to less than 50	Difficult	27	20	25
50 to less than 75	Average	7	16	6
75 to 100	Very Easy	0	2	0

EVS and Math tests are nearly of the same difficulty whereas Language test is comparatively easy. Larger number of items fall in difficult range. Within Language, comprehension is more difficult than grammar and usage. In Maths, fraction and decimal sums are found quite difficult.

Table 25: Distribution of test items according to DI

Range of DI	Type of item	EVS	Lang.	Math
.70 to 1.00	Good Discrimination	1	0	0
.30 to less than .70	Average Discrimination	29	30	26
Less than .30	Poor Discrimination	10	10	11

A large number of items are of average discrimination. Most of the difficult items are poorly discriminating in all the subjects.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.76	0.83
2	Mathematics	38	0.67	0.81
3	Language	40	0.70	0.81

IMPACT OF INTERVENING VARIABLES School

Participation of community, teaching aids, physical and ancillary facilities influence the learning achievement of the children. Ancillary facilities in schools have helped the children in improving the learning skills in the three subjects. Participation of community through various committees, where as and availability of teaching aids influence the learning achievement of children in EVS only, in schools have helped the children in improving their scores in Math and Language.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	24.194	--	56.129	--	61.155	--
PTR	-0.076	-0.053	-0.176*	-0.053*	-0.040	-0.005
Com_Participation	0.988	0.150	2.447*	0.235*	3.096**	0.318**
Teach-aid	0.594*	0.217*	0.685	0.132	0.387	0.179
Physical facility	0.473*	0.231*	0.255	0.061	0.284	0.139
Ancillary facility	2.039*	0.316**	2.076*	0.244*	1.526*	0.316**
Instructional time	0.021	0.019	0.018	0.036	0.223	0.045
Working day	0.022	0.030	0.039	0.018	0.123	0.169
Index-Comp. TLM	0.601	0.162	0.288	0.075	0.445*	0.265**
R²	0.131		0.173		0.212	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 13.1% of total variance in EVS, 17.3% in Mathematics and 21.2% in Language.

Teacher

Teaching aids influence the learning achievement of the children in the three subjects. The positive association of teacher qualification with the three criterions indicates that higher the qualification of teachers, help the learning of children in the two subjects i.e. Mathematics and Language. Teaching aids also help the children in improving their scores in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	42.054	--	36.207	--	45.024	--
Index-Qualification	2.415	0.130	2.696*	0.117*	2.857*	0.125*
Index-Experience	0.106	0.071	1.055	0.019	1.502	0.023
Index-Teaching Aid	6.061**	0.140*	3.094*	0.198*	1.300*	0.330*
Index-School Org.	0.221	0.010	0.031	0.030	0.392	0.083
R²	0.044		0.024		0.027	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 4.4% of total variance in EVS, 2.4% in Mathematics and 2.7% in Language.

Pupil

Teaching-learning processes adopted by teachers in school, schooling practices, educational status and occupation of parents and percentage attendance of children in school influence the learning achievement of children in EVS, Mathematics and Language. The positive association of teacher learning processes, schooling practices, parent's education and occupation with the three criteria indicates that active involvement of teachers in school and attending school regularly by the children enhance the learning achievement of students in EVS, Mathematics and Language. Educational status and occupation of parents also influence the achievement.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	20.293	--	26.402	--	25.195	--
Index-Ed & Occu	5.483**	0.210**	4.002**	0.189**	4.684**	0.056*
Index-Schooling	0.252	0.025	0.168*	0.063*	0.259**	0.021**
Index-TLP	2.175*	0.071*	2.552**	0.068*	2.187**	0.066*
Age	-0.422	-0.021	-0.024*	-0.004	-0.244	-0.082
Detention	-0.879*	-0.078**	-1.047*	-0.033*	-0.275	-0.032
Attendance	0.136**	0.106**	0.122**	0.160**	0.232**	0.213**
R²	0.063		0.052		0.075	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.3% of total variance each in EVS and 5.2% in Mathematics and 7.5% in Language.

One can infer from above analysis that active involvement of teachers in school, attending the school regularly by the students, participation of community in schools, parent's education and occupation status and higher qualification of teachers help the children in enhancing their learning achievement in EVS, Mathematics and Language.

HARD SPOT OF LEARNING

In EVS, question number 12, 18, 21, 25, 29 and 40 were found very difficult and 27 (68%) items were found difficult. The hard spots were found in almost all units.

In Language, no items was found very difficult and 10(25%) items were found difficult. The hard spots were in structure, comprehension of instructions, time table, informatinal passage and story.

In Mathematics, question number 23 was found very difficult, however, 20(52%) items were found difficult. The hard spots were number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

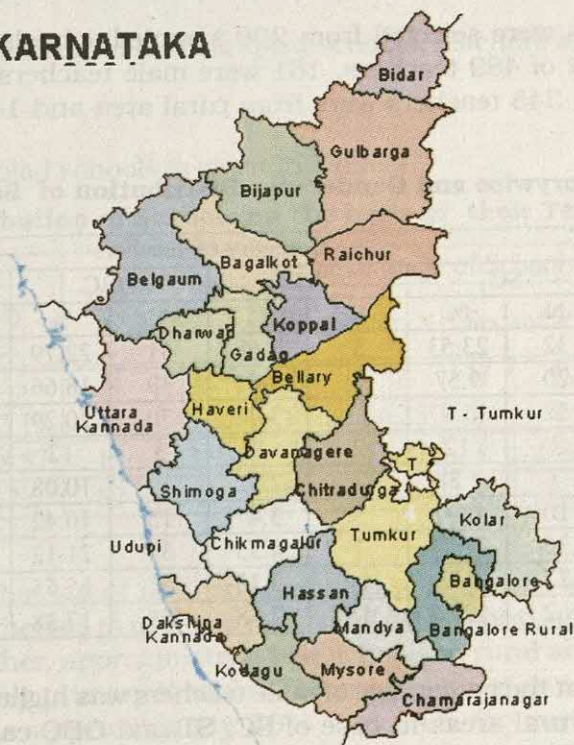
- Musical instruments were available in approximately 1/3rd schools.
- TV and computer were available in very few schools.
- Competency based textbooks were more available for primary classes in 2001 as compared with Teaching aids, Workbooks and Teachers' Handbooks.
- Students were getting more benefit under scholarship for regular attendance incentive scheme as compared to rest incentive schemes implemented in the state.
- Average number of working days in schools was approximately 203.
- Approximately, 90% schools in rural areas were having Village Education Committees.
- AEC, SMC and PTA were more in urban schools than schools in rural areas in terms of percentage.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers in urban schools was higher than in rural schools.
- Teacher pupil ratio was higher in urban schools than rural schools.
- Percentage of male teachers holding higher secondary certificate degree and PG degrees was more than their counterparts female teachers.

- Less than 1% teachers were having Educational Qualification below Class X level.
- Degree holder male teachers were more in Mathematics, Science and Social Science than female teachers.
- Majority of teaching aids were available for more than 85% teachers.
- Approximately, 45% teachers were diploma/certificate in primary/elementary education holders.
- Very few teachers were M.Ed. degree holders.
- Maximum in-service training programmes were conducted by DIET and minimum programmes were conducted by School Complex and Block Resource Centre.
- Maximum in-service training programmes were conducted on 'General Training'.
- Not a single in-service training programmes were conducted on 'Assessment of Pupil Learning' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately 55% teachers have not attended any in-service training programme during last three years.
- For approximately 1/6th students medium of instruction in the school was same as the language spoken at home.
- In most of cases teachers were getting more assistance always from 'Head of Schools'.
- Percentage of mothers having educational qualification degree or higher educational qualification was more than fathers.
- Majority of mothers were housewives and fathers were farmer in rural areas.
- Maximum number of father were skilled worker and mother were housewives in urban areas.
- No mother was doing the work of picking forest produce.
- Students were getting more academic assistance from fathers/guardian than other family members.
- Girls were getting more academic assistance than boys from family members.
- Approximately 88% students were attending schools on above 70% working days.
- Less than 2% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls in Mathematics only.
- Performance of urban students was better than their counterparts in rural areas.
- In Language and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of SC was better than Others category students.
- In rural areas, performance of SC students was better than ST student followed by students of Others category in EVS and Language.
- In urban areas, performance of students of Others category was better than SC students.
- Number of teachers in school and availability of teaching aids in school have helped the children in improving their skills in language only.
- Qualification of teachers have helped the children in enhancing their learning skills in the three subjects.
- Active involvement of teachers in school and attending school regularly have helped the children in improving their learning achievement in the three subjects.

INTRODUCTION

The State of Karnataka, formerly known as the State of Mysore, came into existence on 1956 as per the States re-organisation Act 1956. It was formed by merging the Kannad speaking area of the then states of Madras, Bombay, Hyderabad with the princely state of Mysore. The reorganised state, however, continued to be called Mysore till 1972. It acquired its present name on 1973. There are 32 districts in the state.

KARNATAKA



Since the inception of the state, the educational system has undergone progressive changes. The Literacy rate, which was 30% in 1961, has progressed to 67.04% (Census, 2001). For male it is 76.29% and for female the literacy rate is 57.45%. In case of enrollment and retention the state has brought in tremendous progress. The Gross Enrollment Ratio is 90 girls per 100 boys.

Sample

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 200 schools were sampled 50 from each of the four districts, Bangalore South, Dharwad, Gulbarga South and Coorg districts of Karnataka.

Areawise and management wise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	144	100	69.44	44	30.56	0	0
Urban	56	25	44.64	14	25	17	30.36
Total	200	125	62.5	58	29	17	8.5

Teachers

A total 489 teachers were selected from 200 sampled schools for filling the teacher questionnaire. Out of 489 teachers, 161 were male teachers and 328 were female teachers. Areawise, 345 teachers were from rural area and 144 teachers were from urban area.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	32	23.53	5	3.68	31	22.79	68	50	136
	Female	20	9.57	8	3.83	39	18.66	142	67.94	209
	Total	52	15.07	13	3.77	70	20.29	210	60.87	345
Urban	Male	3	12	2	8	3	12	17	68	25
	Female	7	5.88	3	2.52	12	10.08	97	81.51	119
	Total	10	6.94	5	3.47	15	10.42	114	79.17	144
Total	Male	35	21.74	7	4.35	34	21.12	85	52.8	161
	Female	27	8.23	11	3.35	51	15.55	239	72.87	328
	Total	62	12.68	18	3.68	85	17.38	324	66.26	489

Table 2 shows that the percentage of male teachers was higher than female teachers in both urban and rural areas in case of SC, ST and OBC categories percentage of female teachers were higher than male teachers.

Students

A total number of 3,853 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Bangalore South	Rural	213	211	424
	Urban	237	231	468
	Total	450	442	892
Dharwad	Rural	450	425	875
	Urban	208	146	354
	Total	658	571	1229
Gulbarga South	Rural	380	360	740
	Urban	94	98	192
	Total	474	458	932
Coorg	Rural	333	305	638
	Urban	86	76	162
	Total	419	381	800
Total	Rural	1376	1301	2677
	Urban	625	551	1176
	Total	2001	1852	3853

Out of 3,853 students, 2,677 students were from rural areas and remaining 1,176 students were from urban areas. Out of the total sample, 2,001 were boys and 1,852 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	19	13.19	63	43.75	81	56.25	0	0	0	0
Urban	16	28.57	19	33.93	30	53.57	3	5.36	4	7.14
Total	35	17.5	82	41	111	55.5	3	1.5	4	2

Table 4 indicates that out of 144 rural sampled schools, pre-schools were attached with only 19 schools whereas in urban areas, out of 56 sampled schools, it was attached with 16 schools. Further, approximately 44% schools in rural areas and 34% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 56% and 54% for rural and urban areas respectively. However, 3 and 4 schools having secondary and Sr. secondary classes was figured in the sampled rural schools.

Facilities related to teaching-learning process

It was observed that maps/globes, charts and children's books were available in more than 80% schools. Magazines, journals and newspapers were available only in 42%

schools. Games equipments, primary science kits and maths kits were available in 70% to 75% schools. Besides, play materials, toys, reference books, dictionaries and encyclopedia were available only in 64% to 67% schools. However, mini tool kits were available in 50% schools.

Infrastructural facilities

It was observed that school bell, blackboard chalk and duster and chairs for teachers were available in 93% and more schools. The tables for teachers was available in 77% schools. Water pitcher, ladel and glasses, and play ground were available in 51% to 63% schools. Besides, musical instruments were available in only 28% schools.

Ancillary Facilities

Computer and TV were available in only 7-10% schools. Annual medical check-up facility for children was available in 89% schools. Besides, safe drinking water, toilet facilities, electric connection, Immunization and first aid kit were available in 46% to 59% schools.

Competency Based Teaching Materials

Information gathered shows that out of 200 schools, competency based textbooks were available in 129 to 132 schools for classes I to V in the year 2001, which were available in 1 or 2 schools for classes I to V in the year 1998.

Incentive Scheme

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	3692	2754	642	633	2019	1779	7714	6648	14067	11814
	%	26.25	23.31	4.56	5.36	14.35	15.06	54.84	56.27	100	100
Free uniform	N	5210	5123	1035	1058	3801	4400	9782	12087	19828	22668
	%	26.28	22.60	5.22	4.67	19.17	19.41	49.33	53.32	100	100
Free textbooks	N	5201	4966	944	872	4317	4105	12528	11679	22990	21622
	%	22.62	22.97	4.11	4.03	18.78	18.99	54.49	54.01	100	100
Scholarship for regular attendance	N	2419	2680	520	449	575	419	676	743	4190	4291
	%	57.73	62.46	12.42	10.46	13.72	9.76	16.13	17.32	100	100
Other Schemes	N	1518	1559	302	296	1983	1800	3612	3614	7415	7269
	%	20.47	21.45	4.07	4.07	26.74	24.76	48.72	49.72	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarships for regular attendance, etc. are available to pupils across the categories. The data reveals that both boys and girls from Others category got maximum benefit from mid-day meal, free uniform, free textbook and other schemes. However, both boys and girls from SC category were maximum benefited from scholarship for regular attendance.

Instructional Time

Average number of working days in schools was approximately 218 days and schools were having 8 periods in a day of approximately of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 144 rural schools, 70(48.61%) schools were having Village Education Committees (VEC). Parent-Teacher Association, and School-Management Committees were found more in urban schools than rural schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	70	12	82
	%	48.61	21.43	41
AEC	N	16	5	21
	%	11.11	8.93	10.5
SMC	N	88	44	132
	%	61.11	78.57	66
PTA	N	21	14	35
	%	14.58	25	17.5

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	144	333	38.36	535	61.64	868	6.	47
Urban	56	107	21.88	382	78.12	489	9	43
Total	200	440	32.42	917	67.58	1357	7	45

Table 7 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas was 6 and 9 respectively. Further, average pupil teacher ratio in rural schools was 47:1, however, this ratio was approximately 43:1 in urban schools.

Educational Qualification

The percentage of female and male teachers holding PG degree was almost same. Male teacher holding graduation degree were slightly more than female teachers. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. But this trend was reverse for Sr. secondary educational qualification. Besides, only 3-4% teachers were having below Class X level educational qualification.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	5	3.11	45	27.95	75	46.58	29	18.01	7	4.35	161
Female	13	3.96	97	29.57	148	45.12	56	17.07	14	4.27	328
Total	18	3.68	142	29.04	223	45.6	85	17.38	21	4.29	489

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subjects	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	6	3.73	132	81.99	22	13.66	1	0.62	161
	Female	14	4.27	261	79.57	47	14.33	6	1.83	328
	Total	20	4.09	393	80.37	69	14.11	7	1.43	489
Science	Male	6	3.73	135	83.85	19	11.8	1	0.62	161
	Female	15	4.57	266	81.1	40	12.2	7	2.13	328
	Total	21	4.29	401	82	59	12.07	8	1.64	489
Language	Male	5	3.11	51	31.68	78	48.45	27	16.77	161
	Female	14	4.27	103	31.4	154	46.95	57	17.38	328
	Total	19	3.89	154	31.49	232	47.44	84	17.18	489
Social Science	Male	5	3.11	76	47.2	60	37.27	20	12.42	161
	Female	12	3.66	159	48.48	101	30.79	56	17.07	328
	Total	17	3.48	235	48.06	161	32.92	76	15.54	489

The data reveals that in Mathematics, Science Language and Social Science the percentage of male teachers who studied these subject upto degree level was less than female teachers. However, this trend was reverse for secondary level except social science. Similarly, the percentage of male teachers who studied Mathematics and Science upto higher secondary level was less than female teachers. However, the percentage of female teachers who studied language and social science up to Sr. secondary level was more than their counterparts. Besides, the percentage of female teachers who studied Mathematics, Science, Language and Social Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10 Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
200	Male	141	21	1
	Female	303	37	4
	Total	444	58	5

The majority of teacher were diploma/certificate in Primary/Elementary Education holders. Very few teachers were M.Ed degree holder. Further, female teacher was M.Ed. degree holder. Approximately, 16% teacher were B.Ed.

Availability of Teaching Aids

Data indicates that all teaching aids were available to 85% and more teachers in urban schools except others. Similarly, all teaching aids were more available to teachers in rural schools than teachers teaching in urban schools except science kit and mathematics kit.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teacher
1. School Complex	N	30
	%	5.12
2. Block Resource Centre	N	258
	%	44.03
3. Teacher Resource Centre	N	25
	%	4.27
4. Cluster Resource Centre	N	69
	%	11.77
5. DIET	N	148
	%	25.26
6. SCERT	N	33
	%	5.63
7. Others	N	23
	%	3.92

Data reveals that out of 586 teachers trained in the districts during last three years, 258(44%) teachers were trained by Block Resource Centre, 148(25.26%) by DIETs followed by Cluster Resource Centre who trained 69(11.77%) teachers. However, only 23 teachers were trained by other organisations.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	52
2. Content Enrichment	194
3. Production of Instructional Material	23
4. Use of Instructional Material	18
5. Assessment of Pupil Learning	11
6. Competency based Teaching Learning	140
7. Activity based Joyful Learning	171
8. Others	91

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Content Enrichment' and it was followed by 'Competency based Teaching-Learning'. Minimum programmes were conducted on 'Assessment of Pupil Learning'.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	257	201	232	186
	%	63.93	50.0	57.71	46.27
Average	N	138	180	160	197
	%	34.33	44	39	49
Low	N	7	21	10	19
	%	1.74	5.22	2.49	4.73

It is evident that approximately 34% training programmes were rated averagely effective in terms of utility of knowledge gained during training programmes. Approximately, 64% programmes were considered as 'Highly' useful. However, impact of these training programmes was rated average by 40% to 49% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 46% to 57% teachers.

Out of total 489 teachers, 87(18%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was approximately 15% and 19% respectively. Further, percentage of male teachers in both rural and urban schools was more than their counterparts in the respective areas.

Academic Assistance received from other Sources

Information collected regarding the assistance teachers receive from different sources indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 71% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0.Not Applicable	190	4.89	172	4.46
1.Illiterate	953	24.73	1712	44.43
2.Literate	313	8.12	287	7.49
3.Primary	749	19.44	625	16.22
4.Secondary	1160	30.11	841	21.83
5.Sr. Secondary	198	5.14	71	1.84
6.Deg ree and above	86	2.23	21	0.58
7.Donot Know/Cannot say	204	5.25	124	3.22

Table 14 indicates that approximately 25% fathers and 44% mothers of the students were illiterate. Only 2% fathers and less than 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers except at degree and above level.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	147	51	198	37	50	87
Household/ Housewife	23	5	28	1285	717	2002
Farmer	872	56	928	216	32	248
Poultry farming	29	7	36	11	11	22
Agricultural labour	615	135	750	751	94	845
Picking forest produce	8	5	13	8	5	13
Domestic Servent	28	17	45	122	83	205
Street Vender	36	37	73	7	8	15
Manual unskilled worker	266	262	528	114	69	183
Skilled worker	171	122	293	30	39	69
Clerical worker	41	66	107	9	7	16
Shopkeeper	138	129	267	21	17	38
Employer	38	39	77	5	5	10
Manager/Senior Officer	107	113	220	19	18	37
Others	158	132	290	42	21	63

In rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and fathers were manual unskilled workers. Only few mother and father were picking forest produces. Number of managers/senior officers father and mother was more in rural areas than urban areas. Besides, number of fathers working as managers/senior officers were more than mothers. In decreasing order fathers were working as farmer, agricultural labour, manual unskilled worker, skilled workers, others, shopkeeper, manager/senior officer, and clerical work etc. In decreasing order mothers were working as household/housewives, agricultural labour, farmer, domestic servants, manual unskilled worker, skilled worker, others shopkeeper, manager/senior officer, clerical workers, etc.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	890	875	412	348	1302	1223
	%	64.68	67.26	65.92	63.16	65.07	66.04
Mother	N	646	626	345	333	991	959
	%	46.95	48.12	55.2	60.44	49.53	51.78
Elder Brother/Sister	N	532	525	289	254	821	779
	%	38.66	40.35	46.24	46.1	41.03	42.06
Others	N	114	122	57	57	171	179
	%	8.28	9.38	9.12	10.34	8.55	9.67

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. However, in rural areas girls were getting more academic assistance from father, than boys but the trend was reverse in urban areas in terms of percentage. The descending order of academic assistance provided by the family members was father, mother, elder brother and sister and others.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls. It was also true for both rural and urban areas. The percentage of boys attending school between 70%-80% and 80-90% of working days was more than girls. Only 1-3% percent boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending schools more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Karnataka. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise,

genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

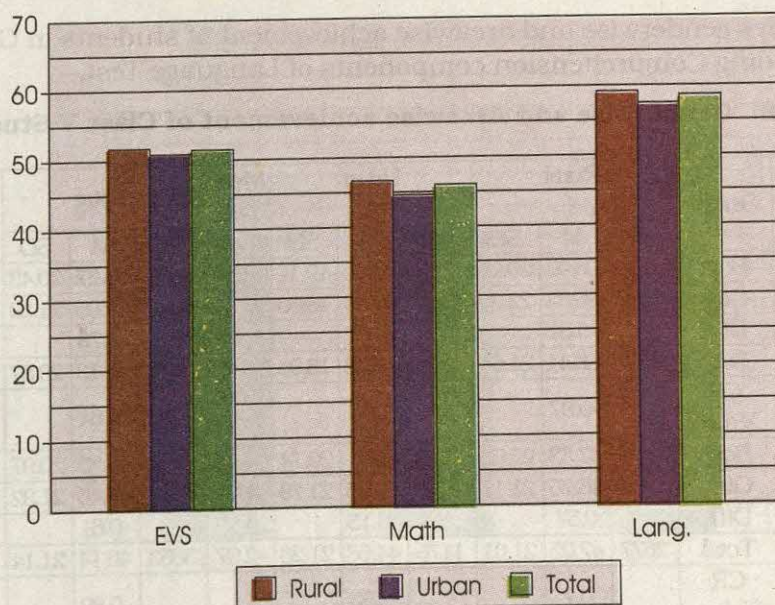
Genderwise and Areawise Achievement

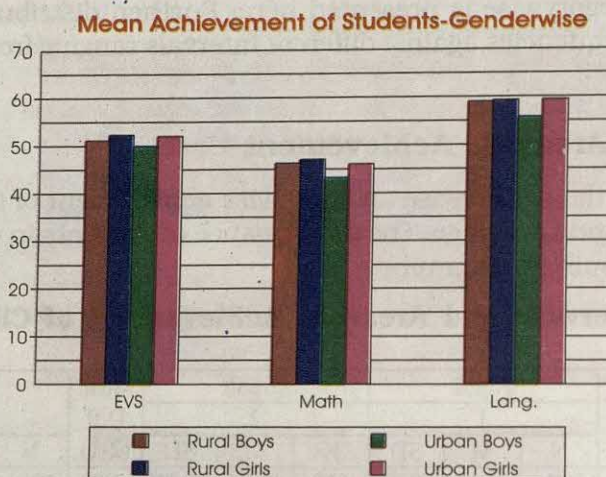
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1376	51.16	19.41	625	49.84	20.49	-1.32	2001	50.75	19.76	-1.36
	Girls	1301	52.31	20.92	551	52.06	21.31	-0.25	1852	52.24	21.03	-0.23
	Diff.		-1.15			-2.22				-1.49		
	Total	2677	51.72	20.16	1176	50.88	20.9	-0.84	3853	51.46	20.39	-1.16
	CR Value		-1.47			-1.82				-2.26		
Mathe- matics	Boys	1376	46.32	21.17	625	43.26	20.31	-3.06	2001	45.37	20.95	-3.08
	Girls	1301	47.03	21.81	551	46.1	21.1	-0.93	1852	46.75	21.6	-0.86
	Diff.		-0.71			-2.84				-1.38		
	Total	2677	46.67	21.48	1176	44.59	20.72	-2.08	3853	46.03	21.27	-2.84
	CR Value		-0.85			-2.34				-2.01		
Langu- age	Boys	1376	59.01	19.02	625	55.74	17.53	-3.27	2001	57.99	18.62	-3.76
	Girls	1301	59.3	19.99	551	59.4	17.69	0.1	1852	59.33	19.33	0.11
	Diff.		-0.29			-3.66				-1.34		
	Total	2677	59.15	19.49	1176	57.46	17.69	-1.69	3853	58.63	18.97	-2.65
	CR Value		-0.38			-3.56				-2.19		

Mean Achievement of Students-Areawise





Environmental Studies

The data reveals that achievement of girls was significantly better than boys. There was no significant difference in areawise achievement of students.

Mathematics

The data reveals that achievement of rural boys as well as total students was significantly better than their counterparts in urban areas. Achievement of urban girls was significantly better than urban boys. The overall performance of girls was significantly better than boys.

Language

The pattern of achievement of students in language was exactly similar as in Mathematics.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Gram- mar & Usage	Boys	1376	66.02	20.97	625	63.62	19.11	-2.4	2001	65.27	20.43	-2.52
	Girls	1301	66.83	22.32	551	67.59	18.65	0.76	1852	67.05	21.29	0.75
	Diff.		-0.81			-3.97				-1.78		
	Total	2677	66.41	21.64	1176	65.48	18.99	-0.93	3853	66.13	20.87	-1.34
	CR Value		-0.97			-3.6				-2.64		
Compre- hension	Boys	1376	47.33	20.92	625	42.6	20.74	-4.73	2001	45.85	20.97	-4.72
	Girls	1301	46.76	21.11	551	45.75	21.79	-1.01	1852	46.46	21.32	-0.92
	Diff.		0.57			-3.15				-0.61		
	Total	2677	47.05	21.01	1176	44.08	21.28	-2.97	3853	46.14	21.14	-4
	CR Value		0.7			-2.53				-0.89		

The data reveals that achievement of rural boys was significantly better than urban boys. The overall achievement of girls was significantly better than boys. In urban areas, girls performed significantly better than boys.

Reading Comprehension

The achievement of rural students as well as rural boys was found to be significantly better than their urban counterparts. In urban areas, performance of girls was significantly better than boys.

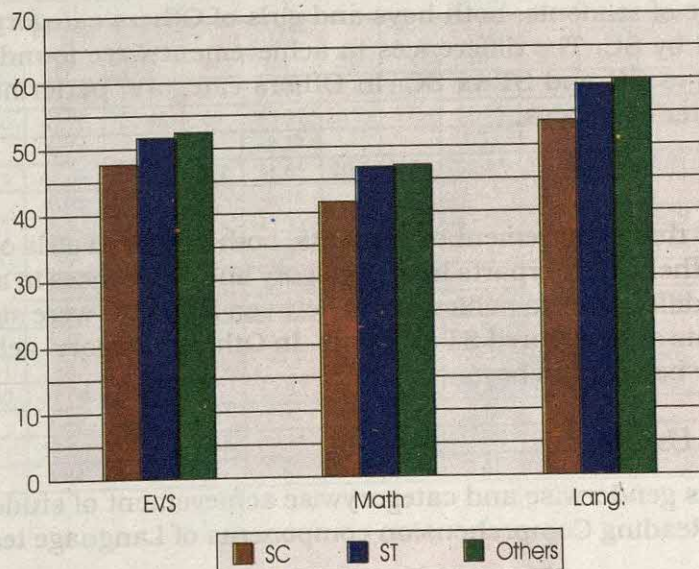
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

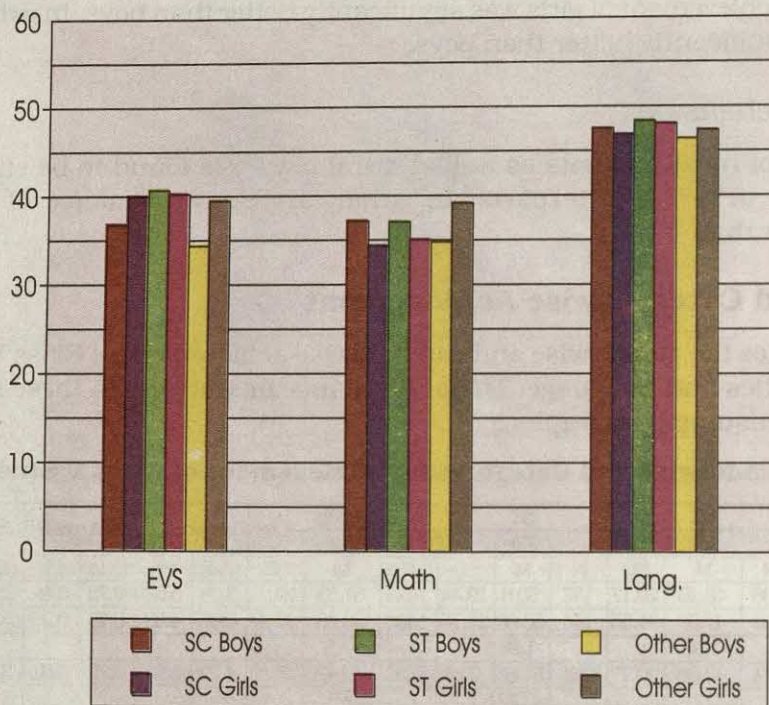
Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	436	48.15	20.17	137	50.8	19.44	1428	51.53	19.61	3.38	3.08	0.73	0.42	2.65	1.38
	Girls	335	47.07	21.55	114	52.68	21.76	1403	53.43	20.67	6.36	4.89	0.75	0.36	5.61	2.38
	Diff.		1.08			-1.88			-1.9							
	Total	771	47.68	20.77	251	51.65	20.5	2831	52.47	20.16	4.79	5.71	0.82	0.61	3.97	2.66
	CR Value		0.71			-0.72			-2.51							
Mathematics	Boys	436	41.88	20.03	137	47.93	19.05	1428	46.19	21.29	4.31	3.87	-1.74	-1.01	6.05	3.2
	Girls	335	41.26	21.2	114	45.68	20.28	1403	48.15	21.6	6.89	5.33	2.47	1.24	4.42	1.99
	Diff.		0.62			2.25			-1.96							
	Total	771	41.61	20.53	251	46.91	19.61	2831	47.16	21.46	5.55	6.59	0.25	0.19	5.3	3.68
	CR Value		0.41			0.90			-2.43							
Language	Boys	436	53.12	18.61	137	60.93	15.56	1428	59.2	18.65	6.08	5.97	-1.73	-1.22	7.81	4.88
	Girls	335	54.37	19.64	114	56.97	21.68	1403	60.71	18.84	6.34	5.35	3.74	1.79	2.6	1.13
	Diff.		-1.25			3.96			-1.51							
	Total	771	53.66	19.06	251	59.13	18.66	2831	59.94	18.76	6.28	8.14	0.81	0.66	5.47	4.01
	CR Value		-0.90			1.63			-2.14							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that performance of Others category was better than ST followed by SC students. The differences in achievement between Others vs SC were significant in case of boys, girls and total students. The differences in achievement between ST vs SC were significant in case of girls and total students. In Others category, achievement of girls was significantly better than boys.

Mathematics

The performance of students, both boys and girls of Others category was better than ST and followed by SC. The differences in achievement were found to be significant between Others vs SC and ST vs SC. In Others category, performance of girls was significantly better than boys.

Language

The data reveals that achievement of students, both boys and girls of Others category was better than their counterparts in SC category and differences in achievement were significant. The differences in achievement between ST vs SC were significant for boys and total students and favoured ST students. In Others category, achievement of girls was significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	436	59.95	20.73	137	68.38	16.94	1428	66.6	20.38	6.65	5.89	-1.78	-1.15	8.43	4.8
	Girls	335	61.28	21.87	114	64.63	23.11	1403	68.63	20.75	7.35	5.58	4	1.79	3.35	1.35
	Diff.		-1.33			3.75			-2.03							
	Total	771	60.53	21.23	251	66.68	20.02	2831	67.61	20.59	7.08	8.26	0.93	0.7	6.15	4.16
	CR Value		-0.86			1.44			-2.63							
Reading Comprehension	Boys	436	41.73	20.55	137	48.52	19.52	1428	46.86	21.09	5.13	4.53	-1.66	-0.94	6.79	3.51
	Girls	335	42.87	21.51	114	44.21	23.67	1403	47.5	20.97	4.63	3.56	3.29	1.44	1.34	0.53
	Diff.		-1.14			4.31			-0.64							
	Total	771	42.22	20.97	251	46.56	21.57	2831	47.18	21.03	4.96	5.82	0.62	0.44	4.34	2.79
	CR Value		-0.74			1.55			-0.81							

The data reveals that achievement of students, both boys and girls of Others category was better than their counterparts in SC category and differences in achievement were significant. The differences in achievement between ST vs SC were significant for boys and total students and favoured ST students. In Others category, achievement of girls was significantly better than boys.

Reading Comprehension

The data reveals that achievement of students, both boys and girls of Others category was better than their counterparts in SC category and differences in achievement were significant. The differences in achievement between ST vs SC were significant for boys and total students and favoured ST students.

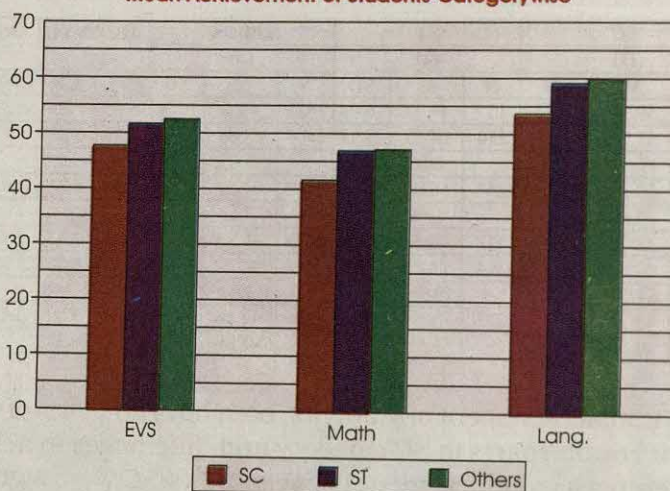
Areawise and Categorywise achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

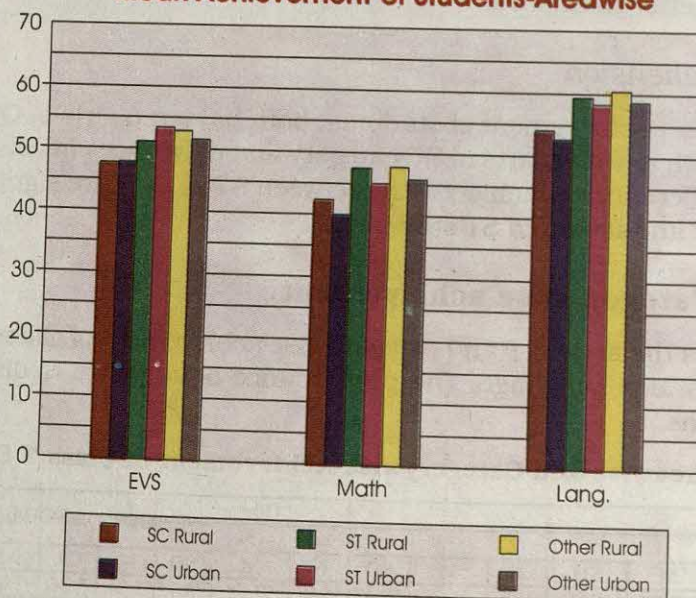
Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	531	47.64	19.98	188	51.08	20.42	1958	52.88	20.05	5.24	5.36	1.8	1.16	3.44	2
	Urban	240	47.78	22.48	63	53.37	20.83	873	51.55	20.39	3.77	2.35	-1.82	-0.67	5.59	1.86
	Diff.		-0.14			-2.29			1.33							
	Total	771	47.68	20.77	251	51.65	20.5	2831	52.47	20.16	4.79	5.71	0.82	0.61	3.97	2.66
	CR Value		-0.08			-0.76			1.61							
Mathematics	Rural	531	42.34	20.74	188	47.52	19.39	1958	47.76	21.73	5.42	5.29	0.24	0.16	5.18	3.09
	Urban	240	40	20.02	63	45.07	20.32	873	45.82	20.79	5.82	3.96	0.75	0.28	5.07	1.77
	Diff.		2.34			2.45			1.94							
	Total	771	41.61	20.53	251	46.91	19.61	2831	47.16	21.46	5.55	6.59	0.25	0.19	5.3	3.68
	CR Value		1.49			0.84			2.26							
Language	Rural	531	54.12	19.86	188	59.4	19.28	1958	60.49	19.19	6.37	6.6	1.09	0.74	5.28	3.2
	Urban	240	52.66	17.16	63	58.33	16.79	873	58.71	17.69	6.05	4.8	0.38	0.17	5.67	2.37
	Diff.		1.46			1.07			1.78							
	Total	771	53.66	19.06	251	59.13	18.66	2831	59.94	18.76	6.28	8.14	0.81	0.66	5.47	4.01
	CR Value		1.04			1.82			2.41							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that achievement of students, both from rural and urban areas of Others category was better than their counterparts in SC category and differences in achievement were significant. The differences in achievement between ST vs SC were significant for rural and total students and favoured ST students.

Mathematics

The data reveals that achievement of students, both from rural and urban areas of Others category was better than their counterparts in SC category and differences in achievement were significant. The differences in achievement between ST vs SC were significant for rural and total students and favoured ST students. In Others category, achievement of rural students was significantly better than urban students.

Language

The data reveals that achievement of students, both from rural and urban areas of Others category was better than their counterparts in ST followed by SC. The differences in achievement were significant between Others vs SC and ST vs SC. In Others category, achievement of rural students was significantly better than urban students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	531	60.79	22.3	188	66.49	21.12	1958	67.93	21.26	7.14	6.61	1.44	0.89	5.7	3.13
	Urban	240	59.95	18.68	63	67.24	16.46	873	66.88	18.98	6.93	5.07	-0.36	-0.17	7.29	3.04
	Diff.		0.84			-0.75			1.05							
	Total	771	60.53	21.23	251	66.68	20.02	2831	67.61	20.59	7.08	8.26	0.93	0.7	6.15	4.16
	CR Value		0.53			-0.29			1.31							
Reading Comprehension	Rural	531	43	21.1	188	47.59	21.19	1958	48.1	20.85	5.1	4.95	0.51	0.32	4.59	2.56
	Urban	240	40.5	20.6	63	43.49	22.56	873	45.1	21.29	4.6	3.04	1.61	0.55	2.99	0.95
	Diff.		2.5			4.1			3							
	Total	771	42.22	20.97	251	46.56	21.57	2831	47.18	21.03	4.96	5.82	0.62	0.44	4.34	2.79
	CR Value		1.55			1.27			3.49							

The data reveals that in both rural and urban areas, differences in achievement of students between Others vs SC and ST vs SC were significant and favoured Others and ST respectively.

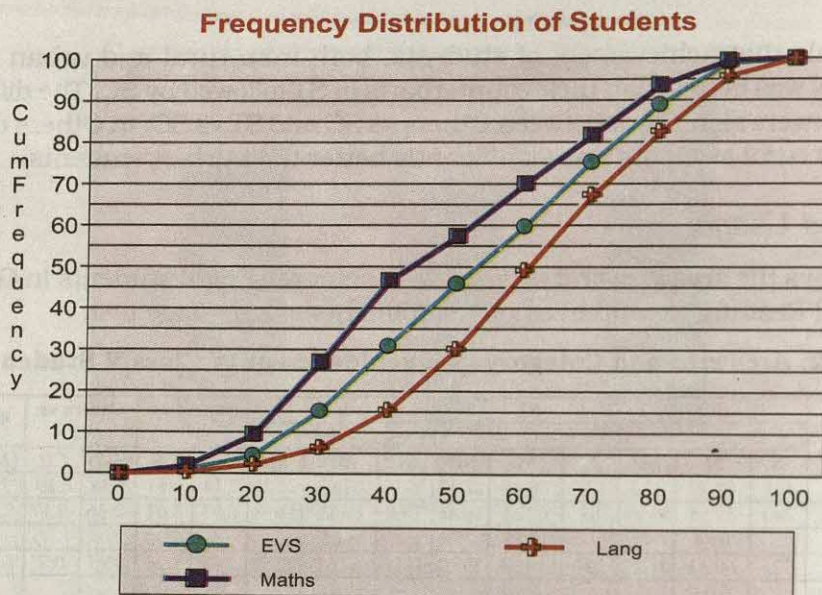
Reading Comprehension

The data reveals that in rural areas, differences in achievement between Others vs SC and ST vs SC were significant and favoured Others and ST respectively. In urban areas, differences in achievement were significant only between Others vs SC favouring Others. In Others category, achievement of rural students was significantly better than urban students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	46	127	415	604	601	510	596	531	383	40
	cf	46	173	588	1192	1793	2303	2899	3430	3813	3853
	cf(%)	1.19	4.49	15.26	30.94	45.96	59.77	75.24	89.02	98.96	100
Math	f	76	293	676	756	412	488	446	464	224	18
	cf	76	369	1045	1801	2213	2701	3147	3611	3835	3853
	cf(%)	1.97	9.58	27.12	46.74	57.44	70.10	81.68	93.72	99.53	100
Language	f	18	73	159	348	568	730	701	586	509	161
	cf	18	91	250	598	1166	1896	2597	3183	3692	3853
	cf(%)	0.47	2.36	6.49	15.52	30.26	49.21	67.40	82.61	95.82	100



The figures posted in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 percent. The least number of cases in EVS (40) in Mathematics (18) and in Language (18) were in the range of 90-100 percent, 90-100 percent and 0-10 percent respectively. The maximum number of cases in EVS (604), in Mathematics (756) and in Language (730) were in the range 30-40 percent, 30-40 percent and 50-60 percent respectively. The 69.04 percent students in EVS, 42.56 percent in Mathematics and 69.74 percent in Language scored more than 50% marks whereas 40.23% in EVS, 29.90% in Mathematics and 50.79% in Language scored more than 60% marks.

Classification of Test Items

According to facility values, items are grouped as follow.

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	4	1	3
25 to less than 50	Difficult	11	11	17
50 to less than 75	Average	25	22	18
75 to 100	Very Easy	0	6	0

There were no easy items except items in grammar portion of Language test. In Mathematics difficult item were on unit conversion and fraction.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	2	0	5
.30 to less than .70	Average Discrimination	35	38	29
Less than .30	Poor Discrimination	2	2	4

Most of the items were having discrimination index of average value. Difficult items had poor discrimination.
The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.82	0.89
2	Mathematics	38	0.80	0.89
3	Language	40	0.76	0.87

IMPACT OF INTERVENING VARIABLES

School

Availability of teaching aids influence the learning achievement in EVS, Mathematics and Language. The positive association of this variable with the three criterions indicates that more the teaching aids, higher is the learning achievement in these subjects. Pupil-teacher ratio has negative association with the criterion Mathematics and Language indicating higher the pupil-teacher ratio, lower is the achievement in the two subjects. It suggests the state should bring down the pupil-teacher ratio, in order to improve the achievement in Mathematics and Language. More teachers should be employed to improve the learning achievement in the two subjects. Availability of competency-based teacher's handbook, workbook, textbook and physical facilities in the school also influence the learning achievement in Language. The positive association of physical and ancilliary facilities in the school with the EVS and Mathematics has helped the children in improving their learning achievement in the subjects.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	31.953	--	26.848	--	29.716	--
PTR	-0.145	-0.109	-0.171*	-0.317	-0.141*	-0.150*
Com_Participation	1.973	0.057	0.896	0.001	1.826	0.061
Teach-aid	1.158*	0.172*	1.151*	0.181*	0.621	0.149*
Physical facility	0.761**	0.023	0.340	0.116	0.304	0.114
Ancillary facility	1.877*	0.149*	1.233	0.010	0.033	0.116
Instructional time	0.020	0.017	0.013	0.038	0.073	0.054
Working day	0.309*	0.124	0.175*	0.189**	0.118	0.174*
Index-Comp. TLM	1.877	0.037	1.073	0.082	-0.100	-0.009
R²	0.098		0.097		0.074	

The predictors explain 9.8% of total variance in EVS, 9.7% in Mathematics and 7.4% in Language independently.

Teacher

Teaching aids and teaching style of teachers influence the learning achievement of

children in the three subjects EVS, Mathematics and Language. The positive association of this variable with the three criteria indicates use of teaching aids and teaching style of teachers has helped the children in improving their learning skills in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	51.285	--	44.535	--	57.634	--
Index-Qualification	0.123	0.046	0.900	0.036	0.723	0.073
Index-Experience	0.920	0.062	0.026	0.026	1.546	0.077
Index-Teaching Aid	7.211**	0.270**	5.276**	0.185**	3.338**	0.157**
Index-School Org.	0.150	0.010	0.014	0.020	0.048	0.021
R²	0.076		0.035		0.032	

The predictors explain 7.6% of total variance in EVS, 3.5 % in Mathematics and 3.2% in Language.

Pupil

The teaching-learning processes adopted by teachers in school, percentage attendance of children in school, schooling practices, educational status and occupation of parents and age of children influence the learning achievement of children in EVS, Mathematics and Language. The positive association of three variables (except the age) with the three criteria indicates that active involvement of teachers in class, schooling practices and educational status of parents help the children in improving their learning achievement in three subjects. The negative association of age with the three criteria indicates that higher the age, lower is the achievement. It is a universal phenomenon.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	49.065	--	39.903	--	62.148	--
Index-Ed & Occu	1.608**	0.078**	1.787**	0.090**	2.734**	0.137**
Index-Schooling	0.491	0.022	0.369	0.055**	0.374	0.062**
Index-TLP	7.157**	0.246**	7.437**	0.248**	5.663**	0.219**
Age	-0.033	-0.031	-0.365	-0.046**	-1.091**	-0.089**
Detention	-0.873**	-0.163**	-0.643**	-0.122**	-0.698**	-0.148**
Attendance	0.016	0.018	0.057**	0.057**	0.088**	0.060**
R²	0.087		0.080		0.084	

The predictors explain 8.7% of total variance in EVS, 8.0% in Mathematics and 8.4% in Language independently.

One can infer from the above analysis that active involvement of teachers in class,, educational status and occupation of parents, use and availability of teaching aids, availability of competency based teacher's workbook, textbook and physical facilities in the school help the children in improving their learning skills in the three subjects.

COMPARISON OF ACHIEVEMENT BETWEEN DPEP VS NON-DPEP DISTRICTS

In Karnataka out of 4 districts, Bangalore South is the only non-DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	1551	52.6	19.99	450	44.36	17.52	-8.5
	Girls	1410	54.48	21.29	442	45.08	18.46	-8.99
	Diff.		-1.88			-0.72		
	Total	2961	53.49	20.64	892	44.72	17.98	-12.33
	CR Value		-2.47			-0.6		
Mathe- matics	Boys	1551	46.74	21.42	450	40.63	18.52	-5.94
	Girls	1410	48.38	21.85	442	41.58	19.94	-6.11
	Diff.		-1.64			-0.95		
	Total	2961	47.52	21.63	892	41.1	19.23	-8.48
	CR Value		-2.06			-0.74		
Language	Boys	1551	58.23	18.96	450	57.17	17.41	-1.11
	Girls	1410	59.62	19.87	442	58.4	17.46	-1.24
	Diff.		-1.39			-1.23		
	Total	2961	58.89	19.41	892	57.78	17.44	-1.62
	CR Value		-1.94			-1.05		

The data reveals that in EVS and Mathematics the achievement of students of DPEP districts was significantly better than students of non-DPEP district. In Language there was no significant difference in achievement of students between DPEP and non-DPEP districts.

HARD SPOT OF LEARNING

In EVS, items 9, 21, 22 and 23 were found very difficult and 11 (27%) items were found difficult. The hard spots were found in climate conditions at varying attitudes, identification of boundaries with neighbouring countries, terms of a legislature, representative of a President in a state, system of governance in India, knowledge of UN days, knowledge of solar system, planets etc., understanding of eclipse, knowledge of composition of air, knowledge of pollution free fuel, effects of weather conditions on human bodies, concept of flotation, conservation of wild animals and knowledge of carrier of diseases.

In Language, item 38 is found very difficult and 11 (27%) items were found difficult. The hard spots in Language are comprehension of instructions, comprehension of time table, comprehension of informatical passage and comprehension of story.

In Mathematics, items 26, 29 and 35 are found very difficult and 17 (41%) items were found difficult. The hard spots in Mathematics are HCF, LCM, unitary method, triangle according to angles, word problem on addition, time, simplification word problems fractions on comparison, division, word problem on subtraction, conversion from one unit to other, word problem on multiplication, percent, word problem on percent, BODMAS, subtraction of fraction, rounding of numbers, area of square and circle – radius – diameter concept.

FINDINGS

- Musical instruments were available in approximately 28% schools.
- TV and computer were available in 1/10th schools.
- Workbooks and Teachers' Handbooks and Teaching Aids were more available for primary classes in 2001 as compared to year 1998.
- Students were getting more benefit under free uniform and free textbooks incentive scheme as compared to rest incentive schemes implemented in the state.
- Nearly half schools in rural areas were having Village Education Committees.
- SMC and PTA were more in schools located in urban areas than schools in rural areas in terms of percentage.
- Percentage of female teachers was higher than male teachers in schools.
- Average number of teachers in urban schools was higher than in rural schools.
- Teacher-pupil ratio was higher in rural schools than urban schools.
- Percentage of PG degree holder female, male teachers was almost same.
- Very few teachers were having below Class X level Educational Qualification.
- Degree holder male teachers were more than there female counterparts.
- Majority of teachers were diploma/certificate in primary/elementary education holders.
- Only few teachers had M.Ed. qualification.
- Majority of teaching aids were available in more than 85% teachers.
- Maximum in-service training programmes were conducted by Block Resource Centre and maximum in-service training programmes were 'Content Enrichment'.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated 'High' by above 50% teachers.
- Approximately, 18% teachers have not attended any in-service training programme during last three years.
- In most of cases in rural areas teachers were getting 'ALWAYS' assistance from 'Head of Schools'.
- For 71% students medium of instruction in the school was same as the language spoken at home.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general, educational qualification of mothers was poorer than fathers.
- Majority of mothers were housewives and fathers were farmer in rural areas.
- Maximum number of fathers were manual un-skilled worker and mothers were housewives in urban areas.
- Students were getting more academic assistance from fathers/guardian than other family members.
- Rural girls were getting more academic assistance from fathers than boys in rural areas. But it was reverse for urban areas.
- Approximately, 88% students were attending schools for more than 70% working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS, Mathematics and Language there was significant difference in students' achievement between Others and SC and ST and SC.

- In all three subjects, performance of students of Others category was better than SC and ST students.
- In rural areas, performance of ST students was better than SC student in all subjects.
- In urban areas, performance of students of Others category was better than SC students in Mathematics and Language.
- Average number of working days were about 218 in a year
- Pupil-teacher ratio was higher in rural schools as compared with urban schools.
- Approximately, 1% teachers had qualification below Class X.
- The number of male teachers having qualification below Class X was higher than female teachers in all subjects at primary level.
- Teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools.
- The maximum number of in-service training programmes were organised on the theme 'general raining and competency based teaching learning'.
- Most of the teachers were getting assistance from the Head of the schools.
- Approximately, 70% father and 44% mothers were literate.
- Majority of mothers were housewives in both in urban and rural areas.
- Percentage of boys attending 90-100% of school days were higher than girls.
- Active involvement of teachers in class, educational status and occupation of parents, availability and use of teaching aids, availability of competency based teacher's workbook, textbook and physical facilities in the school help the children in improving their learning skills in the three subjects.
- State may bring down the pupil-teacher ratio in order to improve the achievement in Mathematics and Language.

INTRODUCTION

The State of Kerala came into existence in 1956, as a result of the re-organisation of states. It has 38,863 sq. km. of area which is just 1.18% of the total area of the country. There are 14 districts in the State. It has got the stupendous success in regard to education as well as many other fields. The Literacy Rate as per the Census-2001 is very heartening.



The total literacy rate is 90.92%. In case of male it is 94.20% and 87.86% in case of female. The Gross Enrolment Ratio is 95 girls against 100 boys (Selected Educational Statistics, 2001). The pupil teacher ratio at the primary level in the state is 36:1.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented below:

Schools

A total 187 schools were sampled from Ernakulam, Malappuram, Trivandrum and Wayanad districts of Kerala. Out of total sampled schools, 139 schools were from rural areas and remaining 48 from urban areas.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	139	108	77.7	3	2.16	28	20.14
Urban	48	35	72.92	0	0	13	27.08
Total	187	143	76.47	3	1.6	41	21.93

Teachers

A total 537 teachers were sampled from 187 sampled schools. Out of 537 teachers, 172 teachers were males and 365 teachers were females. Areawise 404 teachers were from rural areas and 133 teachers were from urban areas.

Table 2: Categorywise and Genderwise distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	5	3.47	1	0.69	55	38.19	83	57.64	144
	Female	14	5.38	1	0.38	74	28.46	171	65.77	260
	Total	19	4.7	2	0.5	129	31.93	254	62.87	404
Urban	Male	0	0	1	3.57	15	53.57	12	42.86	28
	Female	1	0.95	0	0	37	35.24	67	63.81	105
	Total	1	0.75	1	0.75	52	39.1	79	59.4	133
Total	Male	5	2.91	2	1.16	70	40.7	95	55.23	172
	Female	15	4.11	1	0.27	111	30.41	238	65.21	365
	Total	20	3.72	3	0.56	181	33.71	333	62.01	537

Table 2 shows that the percentage of female teachers was higher than male teachers in case of SC and Other categories. However, this trend was reverse in Scheduled Tribes and OBC categories. In rural areas, 4.7%, 0.5%, 31.93% and 62.87% teachers were of SC, ST, OBC and Others categories respectively. In urban areas, 0.75%, 0.75%, 39.1% and 59.4% teachers were from SC, ST, OBC and Others categories respectively. In urban and rural areas, the number of female teachers were more than male teachers in SC and Others categories. Besides, in urban areas not a single male SC teacher figured.

Students

A total number of 4,342 students appeared in each of three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the sampled students genderwise and areawise.

Table 3: Districtwise distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Ernakulam	Rural	487	408	895
	Urban	99	103	202
	Total	586	511	1097
Malappuram	Rural	441	432	873
	Urban	165	167	332
	Total	606	599	1205
Trivandrum	Rural	217	263	480
	Urban	223	245	468
	Total	440	508	948
Wayanad	Rural	533	559	1092
	Urban	533	559	1092
	Total	1678	1662	3340
Total	Rural	1678	1662	3340
	Urban	487	515	1002
	Total	2165	2177	4342

Out of 4,342 students, 3,340 students were from rural areas and remaining 1,002 students were from urban areas. Out of the total sample, 2,165 were boys and 2,177 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	14	10.07	14	10.07	91	65.47	17	12.23	17	12.23
Urban	17	35.42	6	12.5	36	75	3	6.25	3	6.25
Total	31	16.58	20	10.7	127	67.91	20	10.7	20	10.7

Table 4 indicates that out of 139 rural sampled schools, pre-schools were attached with 14 schools whereas in urban areas, out of 48 sampled schools, they were attached with 17 schools. Further, approximately 10% schools in rural areas and 12.5% schools in urban areas were only primary schools. The percentage of primary schools attached with secondary and senior secondary was approximately 11%. However, in the total sampled schools approximately 68% schools were elementary schools.

Facilities related to teaching-learning process

It was observed that in approximately 91% to 96% schools maps, globes, children's books and reference books, dictionaries and encyclopaedia were available to facilitate teaching-learning process. Further, charts and game equipments were

available in 80% to 83% schools. Play material and toys and maths kit were available in 61% and 71% schools respectively. Besides, magazines, journals, newspapers and mini tool kit were available only in 54% and 40% of the total sampled schools, respectively.

Infrastructural facilities

It was observed that black boards, chalk and duster and school bell were available in 94% to 95% schools. Chairs and tables for teachers were available in 82% to 83% schools. Water pitcher, ladel and glasses were available in 42% schools. Further, dustbin and pin up board/notice board were available in 63% to 66% schools. Besides, play ground was available in 74% schools. However, musical instrument was available only in 12% schools.

Ancillary Facilities

Computer and T.V. were available in only 16% and 22% schools. Electric connection for the school and toilet facilities for children were available in more than 91% schools. Further, separate toilet for girls and safe drinking water were available in 81% and 85% schools. However, annual medical check-up, immunisation and first aid-kit were available in 72% to 74% schools.

Competency based Teaching Materials

Information gathered shows that out of 187 schools, competency based textbooks were available in 70 to 79 schools for Classes I to V in the year 2001 as compared to 7 to 8 schools in the year 2000 and zero to two in 1998. Workbooks were available in 19 to 28 schools for Classes I to V in the year 2001 against 2 to 3 schools in the year 2000 and none or one in the year 1998. Further, Teacher's Handbooks for Classes I to V were available from 53 to 63 schools in 2001 against 13-25 in 2000 and 2-13 in 1998. Besides, teaching-aids for Classes I to V were available in 48 to 51 schools in 2001 against 3-8 in the year 2000 and 2-4 in 1998. These all facilities were available more in Malappuram district as compared to other districts.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes in selected schools.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	5482	4751	2034	2030	21933	20653	9523	8719	38972	36153
	%	14.10	13.14	5.22	5.62	56.28	57.13	24.40	24.11	100	100
Free uniform	N	236	194	200	201	366	266	63	75	865	736
	%	27.28	26.36	23.12	27.31	42.31	36.14	7.29	10.19	100	100
Free textbooks	N	831	724	630	539	1315	2017	454	785	3230	4065
	%	25.73	17.81	19.50	13.26	40.71	49.62	14.06	19.31	100	100
Scholarship for regular attendance	N	233	202	738	662	35	264	317	296	1323	1424
	%	17.61	14.19	55.78	46.49	2.65	18.54	23.96	20.78	100	100
Other Schemes	N	504	431	414	327	69	1004	266	379	1253	2141
	%	40.22	20.13	33.04	15.27	5.51	46.89	21.23	17.71	100	100

Various schemes like mid-day meal, free uniform, free textbook, scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, free uniform and free textbook, both the boys and girls from OBC category were maximum benefited. Whereas SC category boys and girls were getting maximum benefit from scholarship for regular attendance.

Instructional Time

Average number of working days in schools was approximately 186. On an average, schools were having 7 periods in a day of approximately 44 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 139 rural schools, 60% schools were having Village Education Committees (VEC). Parent Teacher Association (PTA) was found almost same 98% in rural and urban schools and whereas, Area Education Committee (AEC) was more in term of percentage in urban than rural schools. Besides, School Management Committees were more in urban areas than rural areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	83	27	110
	%	59.71	56.25	58.82
AEC	N	41	18	59
	%	29.5	37.5	31.55
SMC	N	71	32	103
	%	51.08	66.67	55.08
PTA	N	137	47	184
	%	98.56	97.92	98.4

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	139	735	33.36	1468	66.64	2203	16	35
Urban	48	234	28.85	577	71.15	811	17	40
Total	187	969	32.15	2045	67.85	3014	16	36

Table 7 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas are 16 and 17 respectively. Pupil-teacher ratio in urban schools was higher than rural schools.

Educational Qualification

The percentage of male teachers holding PG degree was higher than female teachers. Nearly, 42% teachers were graduates. However, not a single male teacher's qualification was below secondary level. However, only one female teacher's educational qualification was below Class X.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	23	13.37	53	30.81	77	44.77	19	11.05	172
Female	1	0.27	58	15.89	121	33.15	146	40	39	10.68	365
Total	1	0.19	81	15.08	174	32.4	223	41.53	58	10.8	537

Subjectwise educational qualification

Table 9 presents the percentage of teachers according to level upto which they had studied mathematics, science, language and social science.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	1	0.58	115	66.86	38	22.09	18	10.47	172
	Female	4	1.1	250	68.49	79	21.64	32	8.77	365
	Total	5	0.93	365	67.97	117	21.79	50	9.31	537
Science	Male	2	1.16	110	63.95	38	22.09	22	12.79	172
	Female	2	0.55	185	50.68	116	31.78	62	16.99	365
	Total	4	0.74	295	54.93	154	28.68	84	15.64	537
Language	Male	6	3.49	60	34.88	43	25	63	36.63	172
	Female	11	3.01	154	42.19	108	29.59	92	25.21	365
	Total	17	3.17	214	39.85	151	28.12	155	28.86	537
Social Science	Male	1	0.58	92	53.49	37	21.51	42	24.42	172
	Female	0	0	235	64.38	67	18.36	63	17.26	365
	Total	1	0.19	327	60.89	104	19.37	105	19.55	537

The data reveals that in Mathematics, Language and Social Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. This trend was reverse in case of Language. The percentage of female teachers having secondary qualification in Mathematics, Language and Social Science was higher than male teachers. The percentage of female teachers who studied Maths and Social Science upto Senior Secondary was more than male teachers. Less than 1% teacher had studied Mathematics, Science and Social Science. But not a single female teacher was observed who had studied social science below Class X.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/ Elem. Education	B. Ed.	M.Ed.
187	Male	69	18	1
	Female	175	28	0
	Total	244	46	1

Approximately, 12% teachers were B.Ed. degree holders and only one teacher had M.Ed. degree. Besides, approximately, 62% teachers were Diploma/Certificate holder Primary/Elementary Education. Female teachers were more professionally qualified than male teachers.

Availability of Teaching Aids

Teachers guide, dictionary maps, globes and flash cards were more available to teachers teaching in rural schools than teachers teaching in urban schools. In contrast to this, books other than textbooks, charts, science kit, mathematics kit and other teaching aids were more available to urban school teachers. Almost all teaching aids were more available to female teachers than male teachers in urban areas schools, except books other than textbooks. However, maps, charts, flash cards and others were more available to male teachers in rural areas schools.

In-service Training

The account of in-service training programmes organised by various agencies for teachers during the last three years (200-2002) is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	4
	%	0.9
2. Block Resource Centre	N	60
	%	13.54
3. Teacher Resource Centre	N	6
	%	1.35
4. Cluster Resource Centre	N	25
	%	5.64
5. DIET	N	314
	%	70.88
6. SCERT	N	25
	%	5.64
7. Others	N	9
	%	2.03

Data portrays that out of 443 teachers trained during last three years, approximately 71% teachers were trained by DIET followed by Block Resource Centres (14%). Minimum teachers were trained (approx. 1%) by School Complexes.

During in-service training programme number of themes were covered i.e., general training programme content enrichment, production of instructional material and use of instructional material, assessment of pupil's learning etc. The maximum programmes were organised on the theme Assessment of pupil learning (211). However, minimum programmes were conducted on 'Production of Instructional Material'.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	52
Content Enrichment	194
Production of Instructional Material	23
Use of Instructional Material	18
Assessment of Pupil Learning	11
Competency based Teaching Learning	140
Activity based Joyful Learning	171
Others	91

Out of 537 sampled teachers, 172 teachers were without any in-service training during last three years. Percentage of females who have not attended any in-service training programme was more than male teachers. The percentage of teachers without in-service training was more in schools in urban areas than rural areas.

The effectiveness of various training programme is given in Table 13.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	124	65	78	61
	%	33.97	17.80	21.37	16.71
Average	N	214	262	256	259
	%	58.63	71.78	70.14	70.96
Low	N	27	38	31	45
	%	7.40	10.41	08.49	12.33

It is evident that approximately 59% teachers training programmes were rated as Average effective in terms of utility of knowledge. Also, impact of these training programme was rated as Average by almost 71% teachers in different subjects. The improvement in teaching skills in all subjects due to those training programmes was rated as high by approximately 17% to 21% teachers.

Academic Assistance received from various Sources

In the state, various committees have been constituted to provide assistance to teachers to improve quality education. The information collected regarding this aspect was analysed. Analysis shows that teachers in rural and urban areas were getting maximum 'Always' assistance from Head of school and 'Sometimes' from other teachers of the schools and from CRC, BRC co-ordination and DIETS.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 97% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	136	3.13	92	2.12
1. Illiterate	123	2.83	151	3.48
2. Literate	244	5.62	210	4.84
3. Primary	1385	31.90	1363	31.39
4. Secondary	1627	37.47	1738	40.02
5. Sr. Secondary	246	5.67	346	7.97
6. Degree and above	162	3.73	133	3.06
7. Do not Know/ Cannot say	419	9.65	309	7.12

Table 14 indicates that approximately 3% fathers and mothers of the students were illiterate. Only 4% fathers and 3% mothers were having degree or higher educational qualification. Fathers and Mothers educated upto senior secondary level were 6% to 8% respectively. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was slightly better than fathers.

Occupation of Parents

Information regarding occupation of father, mother and guardian of the students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	182	38	220	188	68	256
Household/ Housewife	19	5	24	2345	727	3072
Farmer	330	27	357	17	2	19
Poultry farming	1	3	4	5	1	6
Agricultural labour	208	18	226	46	3	49
Picking forest produce	11	0	11	4	0	4
Domestic Servant	2	5	7	92	32	124
Street Vender	27	17	44	3	1	4
Manual unskilled worker	1192	372	1564	402	62	464
Skilled worker	337	127	464	39	19	58
Clerical worker	63	28	91	22	8	30
Shopkeeper	280	87	367	15	8	23
Employer	126	45	171	5	0	5
Manager/Senior Officer	138	45	183	103	31	134
Others	424	185	609	54	40	94

Approximately, 71% mothers were housewives and 36% fathers were manual unskilled worker. Only a few fathers and mothers were doing poultry farming, picking forest produces and working as street vendor. In decreasing order fathers were working as manual unskilled worker, others, skilled worker, shopkeeper, farmer, agricultural labour, manager/senior officer, employer, etc. In decreasing order mothers were working as house hold/house wife, manual un-skilled worker, manager/senior officer, domestic servant, others, skilled worker, clerical worker and shopkeeper etc.

Academic Assistance

The information collected from the students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	780	822	174	207	954	1029
	%	46.48	49.46	35.73	40.19	44.06	47.27
Mother	N	1016	1046	252	292	1268	1338
	%	60.55	62.94	51.75	56.7	58.57	61.46
Elder Brother/Sister	N	618	603	135	153	753	756
	%	36.83	36.28	27.72	29.71	34.78	34.73
Others	N	133	125	38	38	171	163
	%	7.93	7.52	7.8	7.38	7.9	7.49

The percentage of girls in rural areas get more help than boys from fathers/guardian and mothers. The maximum contribution is from mothers. In rural areas boys get slightly more academic assistance from elder brother/sister than girls. However, the trend was reverse in urban areas.

Attendance

Attendance plays an important role in learning. The picture regarding attendance in the selected schools observed that the percentage of boys having attendance up to 80% - 90% was higher than girls both in rural and urban areas. Overall, approximately 87% students were attending schools on 70% and above working days. Further, students attending schools on 80% and above working days were more in urban areas than rural areas. Further, less than 5% students were attending school below 60% working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Kerala. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

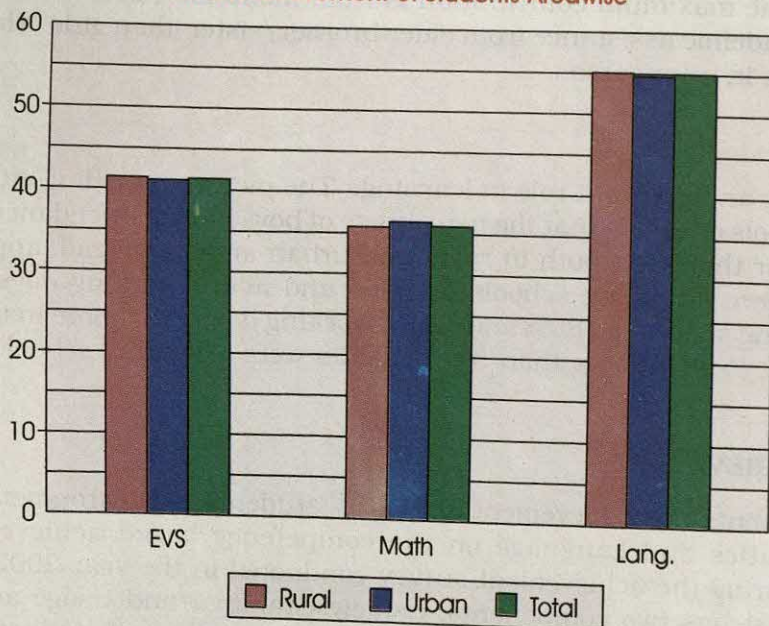
Genderwise and Areawise achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

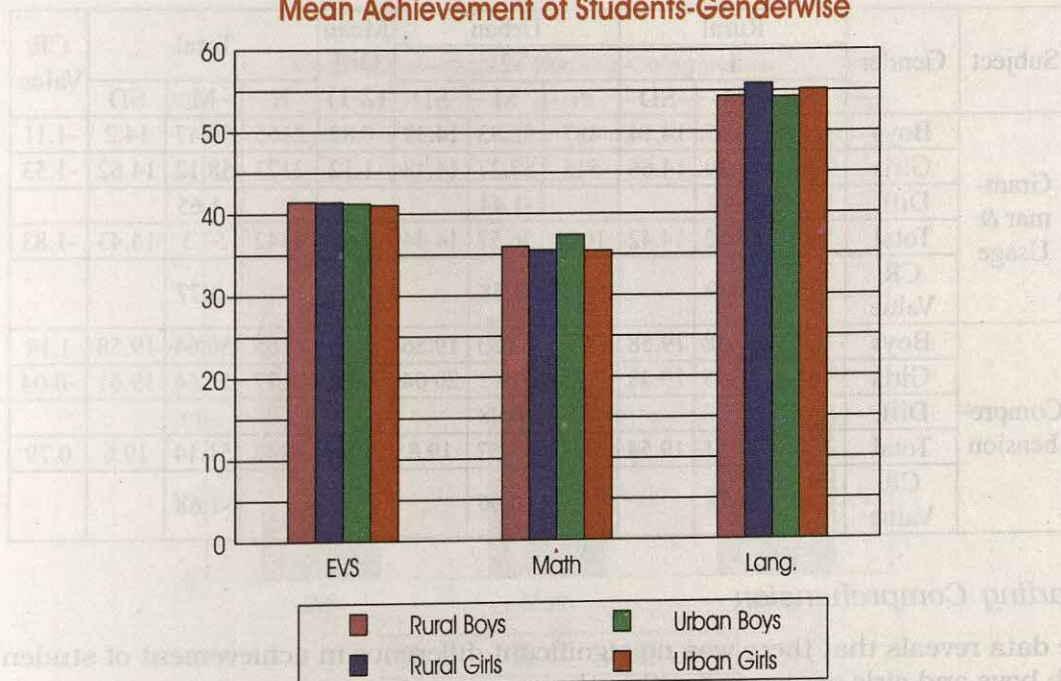
Table 17 Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1678	41.45	13.66	487	41.23	13.36	-0.22	2165	41.4	13.59	-0.32
	Girls	1662	41.4	13.98	515	41.05	12.7	-0.35	2177	41.32	13.69	-0.53
	Diff.		0.05			0.18				0.08		
	Total	3340	41.43	13.82	1002	41.14	13.02	-0.29	4342	41.36	13.64	-0.61
	CR Value		0.1			0.22				0.19		
Mathe- matics	Boys	1678	35.97	14.82	487	37.39	15.31	1.42	2165	36.29	14.94	1.81
	Girls	1662	35.53	14.48	515	35.43	13.84	-0.1	2177	35.51	14.33	-0.14
	Diff.		0.44			1.96				0.78		
	Total	3340	35.75	14.65	1002	36.38	14.6	0.63	4342	35.9	14.64	1.2
	CR Value		0.87			2.12				1.76		
Langu- age	Boys	1678	54.3	14.12	487	54.21	14.64	-0.09	2165	54.28	14.23	-0.12
	Girls	1662	55.86	14.59	515	55.15	14.9	-0.71	2177	55.69	14.66	-0.95
	Diff.		-1.56			-0.94				-1.41		
	Total	3340	55.08	14.37	1002	54.69	14.77	-0.39	4342	54.99	14.46	-0.74
	CR Value		-3.14			-1.01				-3.22		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that there was no significant difference in achievement of students, both boys and girls across and within the areas.

Mathematics

The data reveals that there was no significant difference in achievement of students area-wise. In urban areas, achievement of boys was significantly better than girls.

Language

The data reveals that there was no significant difference in achievement of rural and urban students. The achievement of girls was found to be significantly better than boys. In rural areas, achievement of girls was significantly better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

The data reveals that there was no significant difference in achievement of rural and urban students. The achievement of girls was found to be significantly better than boys. In rural areas, achievement of girls was significantly better than boys.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	1678	56.65	14.14	487	55.83	14.39	-0.82	2165	56.47	14.2	-1.11
	Girls	1662	58.39	14.66	515	57.27	14.48	-1.12	2177	58.12	14.62	-1.53
	Diff.		-1.74			-1.44				-1.65		
	Total	3340	57.52	14.42	1002	56.57	14.44	-0.95	4342	57.3	14.43	-1.83
	CR Value		-3.49			-1.58				-3.77		
Compre- hension	Boys	1678	50.38	19.58	487	51.53	19.56	1.15	2165	50.64	19.58	1.14
	Girls	1662	51.65	19.48	515	51.61	20.04	-0.04	2177	51.64	19.61	-0.04
	Diff.		-1.27			-0.08				-1		
	Total	3340	51.01	19.54	1002	51.57	19.8	0.56	4342	51.14	19.6	0.79
	CR Value		-1.88			-0.06				-1.68		

Reading Comprehension

The data reveals that there was no significant difference in achievement of students, both boys and girls across and within the areas.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

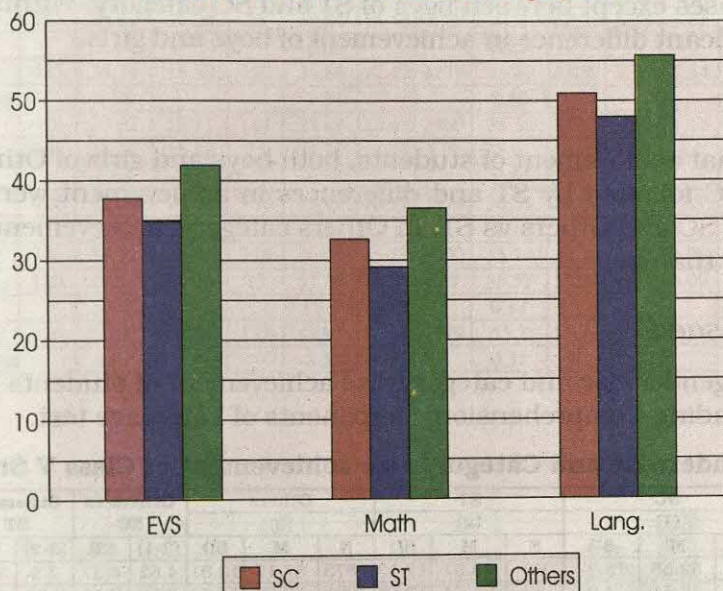
Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
EVS	Boys	232	38.37	13.34	60	35.17	14.04	1873	41.97	13.51	3.6	3.87	6.8	3.7	-3.2	-1.59
	Girls	194	39.19	13.88	77	34.58	11.2	1906	41.81	13.67	2.62	2.51	7.23	5.5	-4.61	-2.85
	Diff.		-0.82			0.59			0.16							
	Total	426	38.74	13.58	137	34.84	12.47	3779	41.89	13.59	3.15	4.54	7.05	6.48	-3.9	-3.11
	CR Value		-0.62			0.27			0.36							
Mathematics	Boys	232	32.61	14.61	60	29.91	11.87	1873	36.95	14.96	4.34	4.26	7.04	4.48	-2.7	-1.49
	Girls	194	32.66	13.79	77	28.5	10.16	1906	36.08	14.42	3.42	3.28	7.58	6.3	-4.16	-2.73
	Diff.		-0.05			1.41			0.87							
	Total	426	32.64	14.23	137	29.12	10.92	3779	36.51	14.69	3.87	5.3	7.39	7.67	-3.52	-3.03
	CR Value		-0.04			0.73			1.82							
Language	Boys	232	50.05	15.14	60	47	16.79	1873	55.04	13.88	4.99	4.78	8.04	3.67	-3.05	-1.28
	Girls	194	51.96	14.56	77	48.7	15.01	1906	56.35	14.53	4.39	4	7.65	4.39	-3.26	-1.63
	Diff.		-1.91			-1.7			-1.31							
	Total	426	50.92	14.89	137	47.96	15.78	3779	55.7	14.22	4.78	6.31	7.74	5.66	-2.96	-1.94
	CR Value		-1.32			-0.62			-2.83							

Environmental Studies

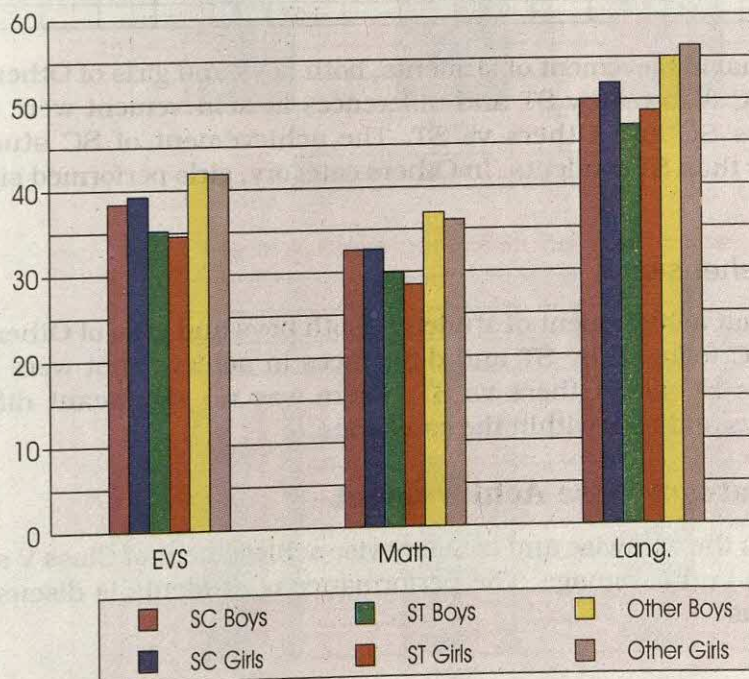
The data given in Table 19 reveals that achievement of students, both boys and girls, of Others category was better than SC followed by ST and the differences in achievement

were significant across the categories. Within categories, there was no genderwise significant differences in achievement.

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Mathematics

The data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST. Categorywise differences in achievement were significant in all cases except between boys of ST and SC category. Within categories, there was no significant difference in achievement of boys and girls.

Language

The data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST and differences in achievement were significant between Others vs SC and Others vs ST. In Others category, achievement of girls was significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	232	52.55	15.37	60	49.67	17.13	1873	57.17	13.81	4.62	4.37	7.5	3.36	-2.88	-1.18
	Girls	194	55.11	14.94	77	51.64	13.61	1906	58.69	14.53	3.58	3.19	7.05	4.44	-3.47	-1.84
	Diff.		-2.56			-1.97			-1.52							
	Total	426	53.72	15.21	137	50.77	15.23	3779	57.94	14.2	4.22	5.46	7.17	5.43	-2.95	-1.97
	CR Value		-1.74			-0.73			-3.30							
Reading Comprehension	Boys	232	45.89	19.72	60	42.56	21.61	1873	51.49	19.36	5.6	4.09	8.93	3.16	-3.33	-1.08
	Girls	194	46.7	18.59	77	43.81	22.1	1906	52.46	19.47	5.76	4.09	8.65	3.38	-2.89	-1.01
	Diff.		-0.81			-1.25			-0.97							
	Total	426	46.26	19.2	137	43.26	21.82	3779	51.98	19.42	5.72	5.82	8.72	4.61	-3	-1.44
	CR Value		-0.44			-0.33			-1.54							

The data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST and differences in achievement were significant between Others vs SC and Others vs ST. The achievement of SC students was significantly better than ST students. In Others category, girls performed significantly better than boys.

Reading Comprehension

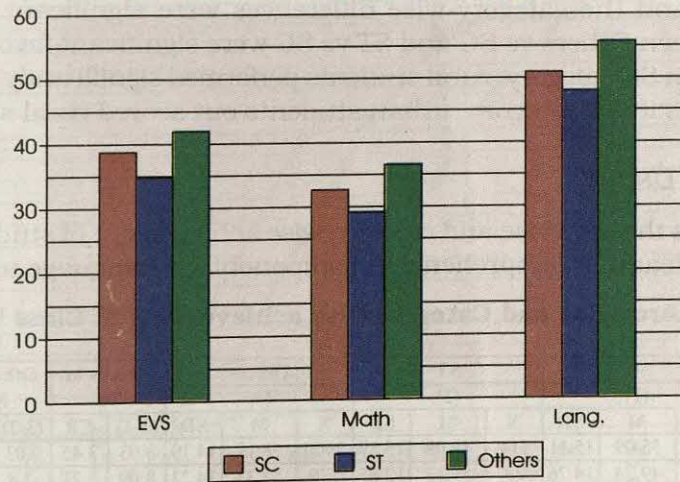
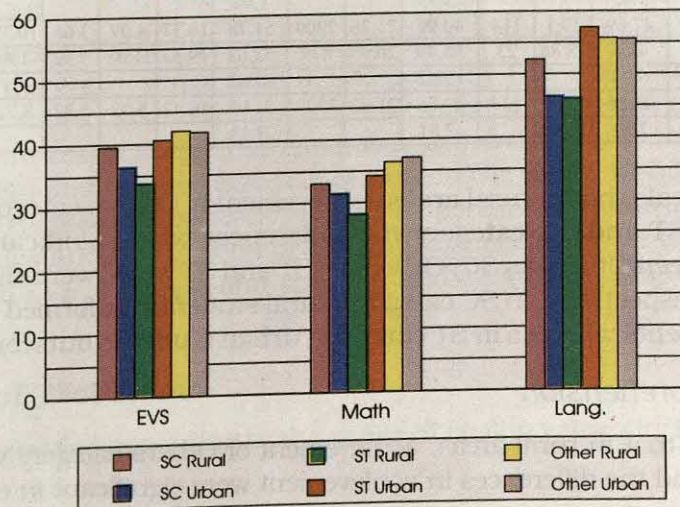
The data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST and differences in achievement were significant between Others vs SC and Others vs ST. There was no significant difference in achievement of boys and girls within the categories.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
EVS	Rural	326	39.49	13.3	114	33.68	11.78	2900	41.95	13.84	2.46	3.15	8.27	7.3	-5.81	-4.38
	Urban	100	36.32	14.26	23	40.54	14.42	879	41.7	12.73	5.38	3.61	1.16	0.38	4.22	1.27
	Diff.		3.17			-6.86			0.25							
	Total	426	38.74	13.58	137	34.84	12.47	3779	41.89	13.59	3.15	4.54	7.05	6.48	-3.9	-3.11
	CR Value		1.98			-2.14			0.50							
Mathe- matics	Rural	326	33.02	13.71	114	28.09	10.48	2900	36.36	14.77	3.34	4.14	8.27	8.11	-4.93	-3.97
	Urban	100	31.39	15.82	23	34.21	11.87	879	37.01	14.42	5.62	3.4	2.8	1.11	2.82	0.96
	Diff.		1.63			-6.12			-0.65							
	Total	426	32.64	14.23	137	29.12	10.92	3779	36.51	14.69	3.87	5.3	7.39	7.67	-3.52	-3.03
	CR Value		0.93			-2.30			-1.16							
Langu- age	Rural	326	52.32	14.81	114	46.05	15.32	2900	55.74	14.13	3.42	3.97	9.69	6.64	-6.27	-3.79
	Urban	100	46.38	14.28	23	57.39	14.88	879	55.57	14.54	9.19	6.09	-1.82	-0.58	11.01	3.22
	Diff.		5.94			-11.34			0.17							
	Total	426	50.92	14.89	137	47.96	15.78	3779	55.7	14.22	4.78	6.31	7.74	5.66	-2.96	-1.94
	CR Value		3.61			-3.32			0.31							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Areawise**

Environmental Studies

The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and the differences in achievement were significant across the categories. In urban areas, achievement of Others category was significantly better than SC students. In SC category, performance of rural students was significantly better than urban students, whereas in ST category, urban students outshined rural students.

Mathematics

The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and the differences in achievement were significant across the categories. In urban areas, achievement of Others category was significantly better than SC students. In ST category, performance of urban students was significantly better than rural students.

Language

The data reveals that in rural areas achievement of Others category was better than SC followed by ST and the category-wise differences were significant. In urban areas, differences between Others vs SC and ST vs SC were significant favouring Others and SC respectively. In SC category, rural students performed significantly better than urban students whereas in ST category, urban students out scored rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	326	55.09	15.11	114	49.09	15.19	2900	58.12	14.19	3.03	3.45	9.03	6.24	-6	-3.64
	Urban	100	49.24	14.76	23	59.13	12.65	879	57.33	14.23	8.09	5.21	-1.8	-0.67	9.89	3.27
	Diff.		5.85			-10.04			0.79							
	Total	426	53.72	15.21	137	50.77	15.23	3779	57.94	14.2	4.22	5.46	7.17	5.43	-2.95	-1.97
	CR Value		3.45			-3.35			1.44							
Reading Comprehension	Rural	326	47.69	19.1	114	40.99	21.36	2900	51.78	19.37	4.09	3.66	10.79	5.31	-6.7	-2.96
	Urban	100	41.6	18.86	23	54.49	20.95	879	52.63	19.57	11.03	5.52	-1.86	-0.42	12.89	2.71
	Diff.		6.09			-13.5			-0.85							
	Total	426	46.26	19.2	137	43.26	21.82	3779	51.98	19.42	5.72	5.82	8.72	4.61	-3	-1.44
	CR Value		2.82			-2.81			-1.13							

The data reveals that in rural areas achievement of Others category was better than SC followed by ST and the categorywise differences were significant. In urban areas differences between Others vs SC, Others vs ST and ST vs SC were significant favouring Others and SC respectively. In SC category, rural students performed significantly better than urban students whereas in ST category, urban students outscored rural students.

Reading Comprehension

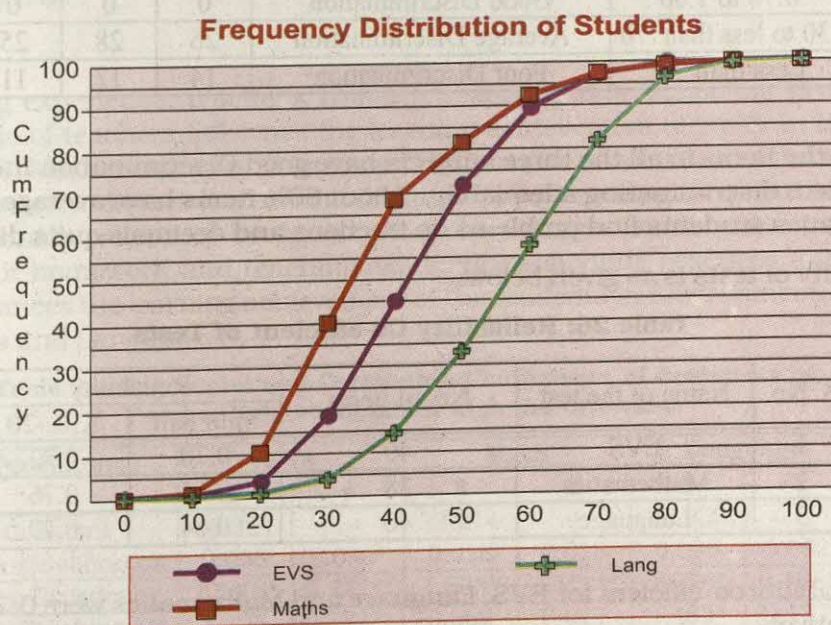
The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and the differences in achievement were significant in each case. In urban

areas, differences in achievement between Others vs SC and ST vs SC were significant favouring Others and SC respectively. In SC category, rural students performed better than urban students, whereas in ST category, urban students performed better than rural students.

Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	17	127	651	1142	1164	775	340	111	11	4
	cf	17	144	795	1937	3101	3876	4216	4327	4338	4342
	cf(%)	0.39	3.32	18.31	44.61	71.42	89.27	97.10	99.65	99.91	100
Math	f	46	404	1289	1235	568	467	222	76	32	3
	cf	46	450	1739	2974	3542	4009	4231	4307	4339	4342
	cf(%)	1.06	10.36	40.05	68.45	81.58	92.33	97.44	99.19	99.93	100
Language	f	2	32	132	456	812	1065	1050	631	150	12
	cf	2	34	166	622	1434	2499	3549	4180	4330	4342
	cf(%)	0.05	0.78	3.82	14.33	33.03	57.55	81.74	96.27	99.72	100



The figures posted in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 percent. The least number of cases in EVS (4), in Mathematics (3) and in Language (2) were in the range of 0-10 per cent, and 90-100 per cent respectively. The maximum number of cases in EVS (1,164), in Mathematics (1,289) and in Language (1065) were in the range 40-50 per cent, 20-30 per cent and 50-60 percent respectively. The 28.52 percent students in EVS, 18.42 per cent in Mathematics and 66.97 percent in Language scored more than 50% marks whereas 10.73% in EVS, 7.67% in Mathematics and 42.45% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24 Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	5	4	12
25 to less than 50	Difficult	21	11	20
50 to less than 75	Average	13	17	6
75 to 100	Very Easy	1	8	0

About 10% items in EVS and Language and 30% items in Mathematics were very difficult. Nearly 50% items in EVS and Mathematics and 25% items in Language belonged to the average difficulty category. 20% items in Language was found very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	26	28	25
Less than .30	Poor Discrimination	14	12	11

None of the items in all the three subjects have good Discrimination Index. Most of the items were discriminating adequately. About 60% items have average value of DI. In Mathematics students find problems on fractions and decimals quite difficult.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.70	0.72
2	Mathematics	38	0.65	0.76
3	Language	40	0.64	0.77

The reliability co-efficient for EVS, Language and Mathematics were 0.72, 0.76 and 0.77 respectively.

IMPACT OF INTERVENING VARIABLES

School

By and large, physical and ancillary facilities available in the school influence the learning achievement of children in the three subjects EVS, Mathematics and Language. The positive association of these variables with the criteria indicates that availability of physical and community participation in schools and ancillary facilities like drinking water, toilet, electric connection, TV, play ground etc., have attracted the children in school.

Table 27: Regression and Correlation Coefficients of Predictors of School Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	41.500	--	23.524	--	49.502	--
PTR	-0.068	-0.044	-0.063	-0.045	-0.033	-0.077
Com_Participation	0.436*	0.070*	0.158	0.026	0.586	0.139
Teach-aid	0.084*	0.136*	0.186*	0.150*	0.852*	0.093*
Physical facility	0.498	0.720*	0.603	0.179*	0.392	0.153*
Ancillary facility	0.604	0.148*	0.177	0.096	0.644	0.199**
Instructional time	0.086	0.010	0.085	0.005	0.073	0.030
Working day	0.035	0.027	0.012	0.050	0.010	0.090
Index-Comp. TLM	0.184	0.115	0.490	0.110	0.123	0.162*
R²	0.063		0.052		0.094	

*Significant level at 0.05 **Significant level at 0.01

The predictors explain 6.3% of total variance in EVS, 5.2% in Mathematics and 9.4% in Language.

Teacher

The teaching experience, teacher's training, teaching aids, schooling practices and teaching style of teachers influence the learning achievement of children in the three subjects EVS, Mathematics and Language. The positive association of these variables with the criterion indicates that availability and use of teaching facilities like teacher's guides, dictionary, reference books, maps, globes, charts, Mathematics and science kits, giving of homework and teaching experience schooling practices and teacher's training enhances the learning achievement of the students in Environmental Sciences, Mathematics and Language.

Table 28: Regression and Correlation Coefficients of Predictors of Teacher Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	40.391	--	32.214	--	55.935	--
Index-Qualification	0.053	0.090*	0.018	0.015	0.023	0.092*
Index-Experience	2.508**	0.227**	1.563*	0.123**	1.774*	0.168**
Index-Teaching Aid	1.126	0.133**	0.069	0.077	1.485*	0.177*
Index-School Org.	0.074	0.090*	0.373**	0.145**	0.105	0.019
R²	0.063		0.031		0.042	

*Significant level at 0.05 **Significant level at 0.01

The predictors explain 6.3% of total variance in EVS, 3.1% in Mathematics and 4.2% in Language.

Pupil

All the five variables of pupil questionnaire i.e., age of students, educational status and occupation of parents, school practices and academic assistance provided by the family members, teaching-learning processes adopted by the teachers in school and percentage attendance of children in school influence the learning achievement of children in all the three subjects i.e., EVS, Mathematics and Language. School practices percentage

attendance, parents education and occupation teaching-learning processes are positively associated with the three criteria and therefore help the children in improving the learning achievement in the three subjects. Age of students is negatively associated with three criteria, indicating that children in higher age group and children of educated parents' score poorly.

Table 29: Regression and Correlation Coefficients of Predictors of Pupil related variables with the Criteria

*Significant level at 0.05 **Significant level at 0.01

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	40.621	--	45.886	--	61.253	--
Index-Ed & Occu	5.577**	0.292**	5.169**	0.265*	6.534**	0.324**
Index-Schooling	1.900**	0.176**	2.343**	0.185**	1.999**	0.190**
Index-TLP	0.646*	0.072**	0.861**	0.080**	1.378**	0.110**
Age	-1.056**	-0.124**	-0.953*	-0.153**	-1.969**	-0.166**
Detention	-0.741*	-0.111**	-0.489**	-0.091**	-0.451*	-0.097**
Attendance	0.118**	0.132**	0.100**	0.112**	0.142**	0.152**
R²	0.117		0.106		0.149	

The predictors explain 11.7% of total variance in EVS, 10.6% in Mathematics and 14.9% in Language.

One can infer that school practices and academic assistance provided by the parents to the children, attending school regularly, active involvement of teachers in school, ancillary facilities and teaching experience and teacher's training help the children in improving their learning achievement in the three subjects.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Kerala out of four districts, Thiruvananthapuram is the only non-DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	440	46.47	12.7	1725	40.1	13.51	-9.27
	Girls	508	46.5	13.74	1669	39.75	13.28	-9.77
	Diff.		-0.03			0.35		
	Total	948	46.48	13.26	3394	39.93	13.39	-13.42
	CR Value		-0.03			0.76		
Mathematics	Boys	440	41.37	14.56	1725	35	14.76	-8.17
	Girls	508	41.57	15.15	1669	33.66	13.54	-10.55
	Diff.		-0.2			1.34		
	Total	948	41.48	14.88	3394	34.34	14.19	-13.19
	CR Value		-0.21			2.76		
Language	Boys	440	59.77	12.76	1725	52.88	14.25	-9.87
	Girls	508	61.42	13.2	1669	53.95	14.64	-10.88
	Diff.		-1.65			-1.07		
	Total	948	60.65	13.02	3394	53.41	14.45	-14.77
	CR Value		-1.95			-2.16		

The data reveals that in all the three subjects, the achievement of students of DPEP districts was significantly better than students of non-DPEP districts.

Hard Spot of Learning

In EVS, items 2, 12, 21, 23 and 40 were found very difficult and 21(52%) items were found difficult. The hard spots were found in identification of a state on the map, natural features of the country, climatic conditions at varying altitudes boundaries with neighbouring countries, understanding a longitude and latitude, identification of poles, representative of a President in a state, judicial functions of courts, recognition of first President of India, system of governance in India, knowledge of postal services, knowledge of UN days, knowledge of pre-British Rule, knowledge of solar system, planets etc., understanding of eclipse, knowledge of composition of air, effect of weather conditions on human bodies, knowledge of pollution free fuel, identification of simple machine, effects of force, understanding of gravitation force, knowledge of health workers, knowledge of parts of human body, conservation of wild animals and knowledge of carrier of diseases.

In Language, items 4, 10, 17 and 36 are found very difficult and 11 (27%) items were found difficult. The hard spots in language are vocabulary, structure, comprehension of informational passage and story.

In Mathematics, 12(30%) items are found very difficult and 20(50%) items were found difficult. The hard spots in language are some number system questions, commercial mathematics, fraction, decimals, measurement of area and some questions in geometry part.

Findings

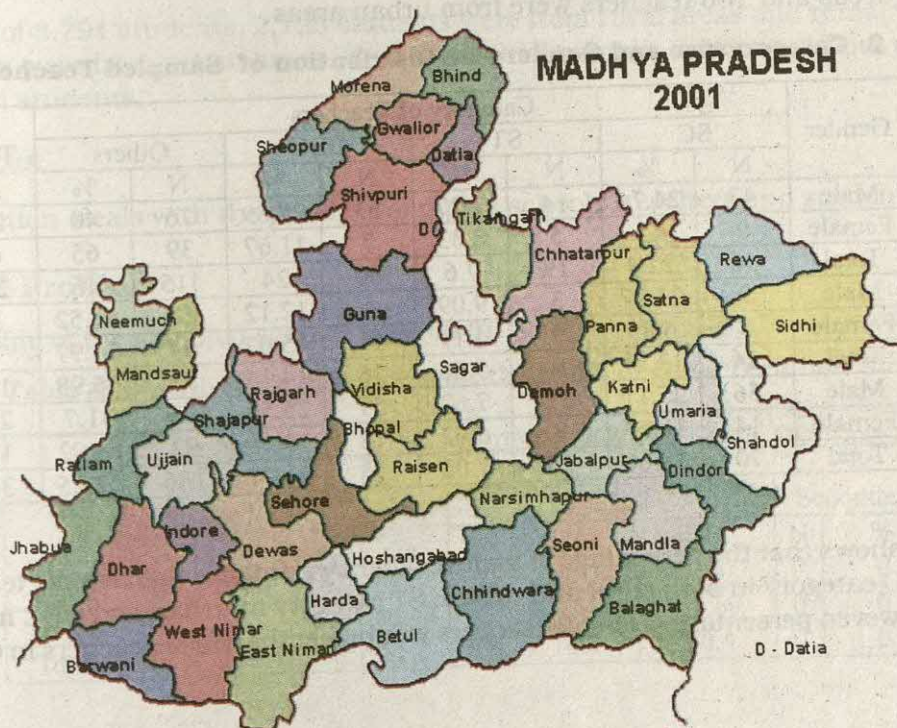
- Achievement of rural girls was significantly better than rural boys in Language. Whereas urban boys was significantly better than urban girls in Mathematics.
- Performance of rural students was better than their counterparts in urban areas. In EVS and Mathematics, there was significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC and ST students. In rural areas, performance of students was better than SC student followed by ST students in all subjects.
- In urban areas, performance of students of Others category was better than ST students and followed by SC students in EVS and Mathematics.
- Competency based teaching materials were more available in the 2001 than previous year.
- Free uniform and scholarship for regular attendance were provided between 8% to 11% students.
- Average number of working days were about 186 in a year.
- Pupil Teacher ratio was higher in urban schools as compared with rural schools.
- The number of male teachers having qualification below Class X was higher than female teachers in all subjects at primary level.
- Teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools.
- The maximum number of in-service training programmes were organised on the theme general training and competency based teaching learning.
- Most of the teachers were getting assistance from the Head of the schools.
- Approximately 70% fathers and 44% mothers were literate.
- Majority of mothers were housewives in both in urban and rural areas.
- Percentage of girls attending 90-100% of school days were higher than boys.
- Number of female teachers was more in rural than female teachers in urban sampled

- schools.
- In urban areas, more pre-schools were attached with schools than rural areas.
 - Maps, globes, children books and reference books, dictionaries and encyclopaedia were available in more than 90% in all schools.
 - T.Vs were more available than computers, but it was available in 22% schools.
 - All teaching aids were more available in the year 2001 against previous academic years.
 - More than 81% students were receiving facilities under Mid-day meal incentive schemes.
 - Parent Teacher Association were almost same in urban and rural schools and also it was in approximately 98% schools.
 - Female teachers were more than male teachers.
 - Average teachers per school was 16.
 - Nearly 1/10th of the teachers were PG degree holders.
 - Percentage of female teachers who studied Maths, Science and Language below Sr. Secondary level was higher than male teachers.
 - The percentage of female teachers who studied language upto degree level was more than their counterparts.
 - Approximately, 12% teachers were B.Ed. degree holders.
 - Female teachers were professionally qualified than male teachers.
 - Majority of teaching aids were more available in urban schools than rural schools.
 - DIETs organised maximum in-service programmes.
 - Maximum training Programmes were conducted on the Theme 'Assessment of Pupil Learning'
 - The impact of the in-service training programmes was rated as average by more than 2/3 teachers.
 - Approximately, 32% teachers have not attended any in-service training programme during last three years.
 - Educational level of mothers was slightly better than fathers.
 - Majority of mothers were housewives and a large number of fathers were manual unskilled workers.
 - Students get more help from mothers than other family members.
 - Students attending schools on 80% and above working days were more in urban areas than rural areas.
 - Less than 5% students were attending schools below 61% of working days.
 - Schooling practices and academic assistance provided by family members to the children, attending school regularly, active involvement of teachers in the class, in the school, ancillary facilities and teaching experience and teacher's training help the children in improving their learning achievement in the three subjects.

MADHYA PRADESH

INTRODUCTION

The state of Madhya Pradesh came into existence on 1956, consequent upon re-organisation of the then states of Madhya Pradesh, Madhya Bharat, Bhopal and Vindya Pradesh as also the Sironj region of district Kota of Rajasthan. Madhya Pradesh has the Literacy rate very close to the national average i.e., 64.11%, whereas for male it is 76.80% and 50.08% for female (Census, 2001). There are 45 districts in the state.



The Gross Enrollment Ratio for the state is 81 girls per 100 boys. The Pupil Teacher Ratio is 40:1 for the state.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 250 schools were sampled from Bhopal, Damoh, Mandasour, Rewa and Shivpuri districts of Madhya Pradesh. Out of total sampled schools 50 schools were from each selected district.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	191	60	31.41	7	3.66	124	64.92
Urban	59	13	22.03	5	8.47	41	69.49
Total	250	73	29.2	12	4.8	165	66

Teachers

A total 356 teachers were sampled from 250 sampled schools. Out of 356 teachers, 223 were male teachers and 133 were female teachers. Areawise, 250 teachers were from rural areas and 106 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	47	24.74	14	7.37	53	27.89	76	40	190
	Female	9	15	5	8.33	7	11.67	39	65	60
	Total	56	22.4	19	7.6	60	24	115	46	250
Urban	Male	9	27.27	3	9.09	4	12.12	17	51.52	33
	Female	5	6.85	3	4.11	11	15.07	54	73.97	73
	Total	14	13.21	6	5.66	15	14.15	71	66.98	106
Total	Male	56	25.11	17	7.62	57	25.56	93	41.7	223
	Female	14	10.53	8	6.02	18	13.53	93	69.92	133
	Total	70	19.66	25	7.02	75	21.07	186	52.25	356

Table 2 shows that the percentage of male teachers was higher than female teachers in case of SC category in both rural and urban, ST category in urban and OBC in rural schools. However, percentage of female teachers was higher than male teachers in Others categories.

Students

A total number of 3,791 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Bhopal	Rural	310	295	605
	Urban	157	144	301
	Total	467	439	906
Damoh	Rural	370	267	637
	Urban	142	94	236
	Total	512	361	873
Mandsour	Rural	262	243	505
	Urban	81	72	153
	Total	343	315	658
Rewa	Rural	271	249	520
	Urban	76	123	199
	Total	347	372	719
Shivpuri	Rural	320	138	458
	Urban	93	84	177
	Total	413	222	635
Total	Rural	1533	1192	2725
	Urban	549	517	1066
	Total	2082	1709	3791

Out of 3,791 students, 2,725 students were from rural areas and remaining 1,066 students were from urban areas. Out of the total sample, 2,082 were boys and 1,709 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	30	15.71	162	84.82	29	15.18	0	0	0	0
Urban	2	3.39	51	86.44	7	11.86	1	1.69	0	0
Total	32	12.8	213	85.2	36	14.4	1	0.4	0	0

Table 4 indicates that out of 191 rural sampled schools, pre-primary classes were attached with only 30 schools whereas in urban areas, out of 59 sampled schools, it was attached with only 2 schools. Further, approximately 85% schools in rural areas and 86% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 15% and 12% for rural and urban areas respectively. However, no school having secondary classes was sampled from rural areas.

Facilities related to teaching-learning process

It was observed that maps and charts were available in 80% schools. Magazines, journals and newspaper were available only in 10% schools. Reference books, dictionaries, encyclopedia, maths kit, primary science kit were available in 35% to 50% schools. Further, mini tool kit and was available in 23% schools. Children books were available in 76% schools. Besides, globes, play material and toys and game equipment were available in 50% to 57% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs for teachers and chalk and duster were available in 90% and more schools. Whereas, tables for teachers and water pitcher, ladel and glasses were available in 84% to 87% schools. Besides, play ground was available in 64% schools. However, musical instruments were available in only 10% schools. Further, dustbin and pin-up board/notice board were available in 37% and 41% schools.

Ancillary Facilities

Computer and TV facilities were available only 1% and 5% of schools respectively. Annual medical check-up for children, and safe drinking water facilities were available in 72% and 74% schools respectively. Besides, toilet facilities available in only 28% schools. However, separate toilet for girls, electric connection and first aid kit were available 12% to 21% schools.

Competency based Teaching Materials

Information gathered shows that out of 250 schools, competency based textbooks were available in 15 to 32 schools for classes I to V in the year 2001, and in 7 to 167 schools for Classes I to V in the year 1998.

Work books were available in 9 to 21 schools in the year 2001 as compared to 3 to 144 schools in the year 1998 for Classes I to V. The teachers' Handbooks were available in 11 to 23 schools in the year 2001 and in 6 to 155 schools in the year 1998 for primary classes. Besides, teaching aids were available in 10 to 29 schools in 2001, in 7 to 118 schools in 1998 for Classes I to V. It is pertinent to mention here that high range in the year 1998 was observed due to more availability of above stated materials in Class IV only.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	4970	4448	1366	1144	9298	8707	2292	2809	17926	17108
	%	27.73	26.00	7.62	6.69	51.87	50.89	12.78	16.42	100	100
Free uniform	N	48	1352	8	219	21	105	0	4	77	1680
	%	62.34	80.48	10.39	13.03	27.27	6.25	0	0.24	100	100
Free textbooks	N	3276	3254	900	795	2147	2339	335	369	6658	6757
	%	49.20	48.16	13.51	11.77	32.25	34.61	5.03	5.46	100	100
Scholarship for regular attendance	N	143	1779	24	376	215	121	0	6	382	2282
	%	37.44	77.96	6.28	16.48	56.28	5.30	0	0.26	100	100
Other Schemes	N	36	45	2	3	15	10	0	1	53	59
	%	67.92	76.28	3.78	5.08	28.30	16.95	0	1.69	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal both boys and girls of OBC category get maximum benefit. Whereas, SC category boys and girls got maximum benefit from schemes like free uniform, free textbooks and other schemes. But girls from SC category and boys from OBC category were maximum benefited from scholarship for regular attendance.

Instructional Time

Average number of working days in schools was approximately 221 days on an average. Schools were having on an average 6 periods in a day of approximately of 43 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 191 rural schools, 188(98%) schools were having Village Education Committees (VEC) and Parent-Teacher Association was in 175 (91%) schools. Area Education Committees were almost same in terms of percentage in both areas. School-Management Committees were found more in urban schools than rural schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	188	45	233
	%	98.43	76.27	93.2
AEC	N	13	4	17
	%	6.81	6.78	6.8
SMC	N	20	10	30
	%	10.47	16.95	12
PTA	N	175	52	227
	%	91.62	88.14	90.8

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Teacher Pupil Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	191	422	65.33	224	34.67	646	3	42
Urban	59	85	28.62	212	71.38	297	5	43
Total	250	507	53.76	436	46.24	943	4	43

Table 7 shows that overall number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 3 and 5, respectively. Further, average pupil teacher ratio was 43:1, however, this ratio was 42:1 approximately in rural schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers who studied upto Sr. secondary level was lower than their counterparts. Besides, only male teacher was Class X certificate holder and similarly only on female teacher was below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	1	0.45	97	43.5	74	33.18	51	22.87	223
Female	1	0.75	0	0	44	33.08	34	25.56	54	40.6	133
Total	1	0.28	1	0.28	141	39.61	108	30.34	105	29.49	356

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	47	21.08	85	38.12	80	35.87	11	4.93	223
	Female	45	33.83	47	35.34	40	30.08	1	0.75	133
	Total	92	25.84	132	37.08	120	33.71	12	3.37	356
Science	Male	35	15.7	64	28.7	110	49.33	14	6.28	223
	Female	34	25.56	40	30.08	49	36.84	10	7.52	133
	Total	69	19.38	104	29.21	159	44.66	24	6.74	356
Language (Medium)	Male	1	0.45	5	2.24	120	53.81	97	43.5	223
	Female	2	1.5	4	3.01	64	48.12	63	47.37	133
	Total	3	0.84	9	2.53	184	51.69	160	44.94	356
Social Science	Male	18	8.07	65	29.15	93	41.7	47	21.08	223
	Female	19	14.29	32	24.06	49	36.84	33	24.81	133
	Total	37	10.39	97	27.25	142	39.89	80	22.47	356

The data reveals that in Language, Science and Social Science the percentage of female teachers who studied these subject upto degree level was more than male teachers. However, this was reverse in case of Mathematics. The percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than female teachers. This trend was reverse at secondary level in Science and Language. Besides, the percentage of female teachers who studied Mathematics, Science, Language and Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
250	Male	116	40	0
	Female	63	44	1
	Total	179	84	1

The majority of teacher had diploma/ certificate in Primary/Elementary Education and only one female teacher was having M.Ed. degree. However, not a single male teacher was M.Ed. degree holder. Besides, only 84 teachers had B.Ed. degree.

Availability of Teaching Aids

Information regarding various type of teaching aids available to teachers in both rural and urban was collected: It indicates that all teaching aids were available to more than 85% teachers in urban schools. Similarly, teaching aids were available to more than 89% teachers in rural schools, except Science kit and Mathematics kit and others. Genderwise, all teaching aids such as teachers' guide, dictionary, globe, charts, flash

cards, science kit, mathematics kit were more available to female teachers teaching in urban schools than male teachers except books other than textbooks. This trend was almost similar for schools in rural areas, except for maps, charts and flash cards.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	2
	%	0.5
2. Block Resource Centre	N	156
	%	39.1
3. Teacher Resource Centre	N	3
	%	0.75
4. Cluster Resource Centre	N	108
	%	27.07
5. DIET	N	126
	%	31.58
6. SCERT	N	1
	%	0.25
7. Others	N	3
	%	0.75

Data portrays that 399 teachers were trained in the districts during last three years. 39% teachers were trained by Block Resource Centres, 32% by DIET, half percent by School Complex and 27% by Cluster Resource Centre. However, minimum, teachers were trained by SCERT i.e., only one.

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Assessment of Pupil Learning' followed by 'Content Enrichment'. Minimum programmes were conducted on 'Use of Instructional Material'.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	16
2. Content Enrichment	148
3. Production of Instructional Material	11
4. Use of Instructional Material	8
5. Assessment of Pupil Learning	24
6. Competency based Teaching Learning	201
7. Activitybased Joyful Learning	39
8. Others	62

Out of total 356 teachers, 29(8.15%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 6% to 12%. The percentage of female teachers in rural schools was more than their counterparts in the respective area. However, in urban areas the percentage of males and females was almost same.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math.
High	N	103	116	115	104
	%	31.50	35.47	35.17	31.80
Average	N	216	207	207	218
	%	66.05	63.30	63.30	66.67
Low	N	8	4	5	5
	%	2.45	1.22	1.53	1.53

It is evident that approximately 66% training programmes were average effective in terms of utility of knowledge gained during training programmes. Approximately, 1/3rd programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 63% to 67% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 32% to 35% teachers.

Academic Assistance received from Various Sources

The information gathered regarding assistance teachers get from various sources the indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for 99% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Students Profile

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	108	2.85	161	4.25
1. Illiterate	961	25.35	2181	57.53
2. Literate	312	8.23	446	11.76
3. Primary	998	26.33	619	16.33
4. Secondary	933	24.61	280	7.39
5. Sr. Secondary	333	8.79	46	1.21
6. Degree and above	86	2.67	8	0.21
7. Do not Know/ Cannot say	60	1.58	50	1.32

Table 14 indicates that approximately 25% father and 58% mother of the students were illiterate. Only 3% father and 0.20% mother were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	105	45	150	129	48	177
Household/ Housewife	8	1	9	1872	671	2543
Farmer	1420	104	1524	219	45	264
Poultry farming	4	1	5	1	1	2
Agricultural labour	397	89	486	290	43	333
Picking forest produce	1	1	2	1	0	1
Domestic Servent	12	18	30	10	25	35
Street Vender	18	44	62	21	10	31
Manual unskilled worker	150	147	297	67	123	190
Skilled worker	250	272	522	63	31	94
Clerical worker	34	28	62	1	5	6
Shopkeeper	120	104	224	6	20	26
Employer	19	9	28	1	0	1
Manager/Senior Officer	71	28	99	8	3	11
Others	116	175	291	36	41	77

In rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mothers were doing poultry work, picking forest produces, clerical work and employer occupation. Number of Manager/Senior Officers father and mother was more in rural areas than urban areas. Further, like mothers few fathers were doing poultry work and picking forest produce work. In decreasing order, fathers

were working as farmer, skilled worker, agricultural labour, manual unskilled worker, others, shopkeeper and manager/senior officer etc. In decreasing order, mothers were working as household/housewives, agricultural labour, farmer, manual skilled worker, skilled worker, others, and domestic servant etc. However, not a single mother was employer in urban areas.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian.	N	504	394	134	139	638	533
	%	32.88	33.05	24.41	26.89	30.64	31.19
Mother	N	151	120	50	40	201	160
	%	9.85	10.07	9.11	7.74	9.65	9.36
Elder Brother/Sister	N	416	350	130	84	546	434
	%	27.14	29.36	23.68	16.25	26.22	25.39
Others	N	120	126	53	61	173	187
	%	7.83	10.57	9.65	11.8	8.31	10.94

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. However, students in rural areas were getting more academic assistance from father, than urban areas. Further, girls were getting more academic assistance than boys from all. The descending order of academic assistance provided by the family members was father, elder brother and sisters, others and mother for girls but it was father, elder brother and sisters, mother and others for boys.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. However, the percentage of girls attending school between 80-90% of working days was more than boys in all areas almost same. Approximately, 4% boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Madhya Pradesh. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

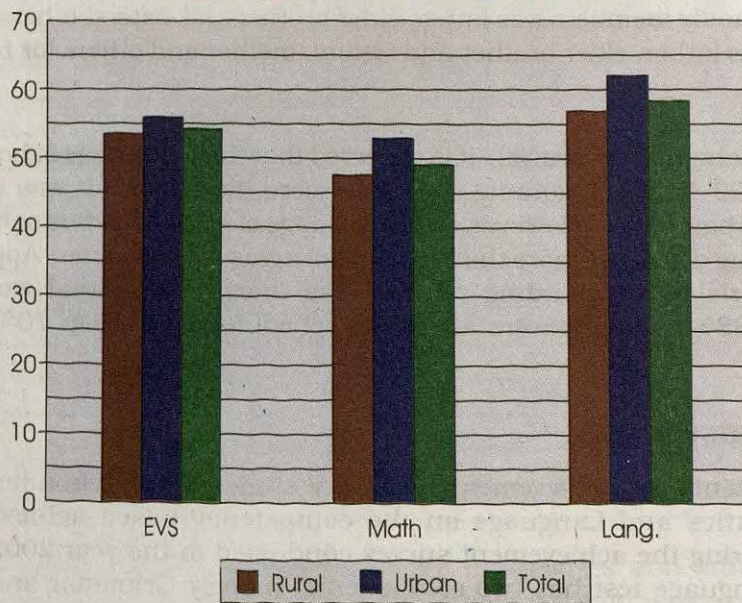
Genderwise and Areawise Achievement

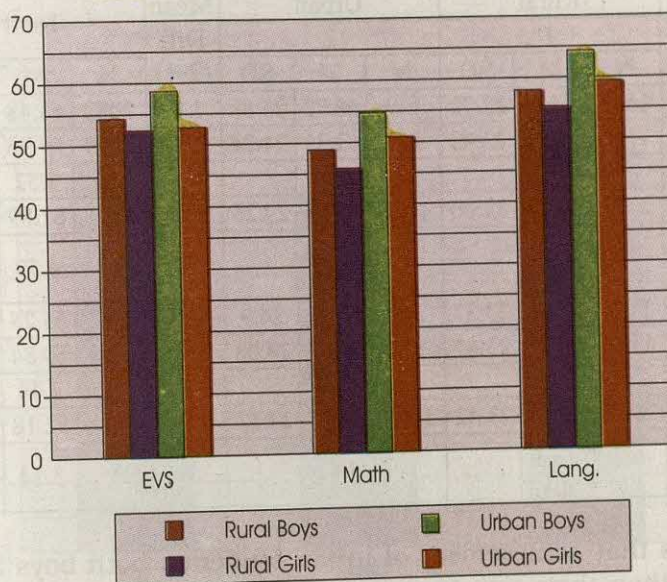
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1533	54.25	23.02	549	58.66	24.93	4.41	2082	55.42	23.61	3.63
	Girls	1192	52.34	23.04	517	52.74	23.26	0.4	1709	52.46	23.1	0.33
	Diff.		1.91			5.92				2.96		
	Total	2725	53.42	23.05	1066	55.79	24.3	2.37	3791	54.09	23.43	2.74
	CR Value		2.15			4.01				3.89		
Mathe- matics	Boys	1533	48.88	22.46	549	54.73	24.28	5.85	2082	50.42	23.09	4.94
	Girls	1192	45.83	21.54	517	50.8	22.83	4.97	1709	47.33	22.05	4.2
	Diff.		3.05			3.93				3.09		
	Total	2725	47.54	22.11	1066	52.82	23.65	5.28	3791	49.03	22.68	6.29
	CR Value		3.6			2.72				4.2		
Langu- age	Boys	1533	57.99	21.41	549	64.31	22.68	6.32	2082	59.65	21.92	5.68
	Girls	1192	55.31	21.66	517	59.39	21.78	4.08	1709	56.54	21.77	3.56
	Diff.		2.68			4.92				3.11		
	Total	2725	56.82	21.56	1066	61.92	22.37	5.1	3791	58.25	21.91	6.37
	CR Value		3.22			3.61				4.36		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that achievement of urban boys and total students was significantly better than their counterparts in rural areas. Further, achievement of boys was significantly better than girls in both rural and urban areas.

Mathematics

The data reveals that achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In both rural and urban areas, performance of boys was significantly better than girls.

Language

The data reveals that achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In both rural and urban areas, performance of boys was significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	1533	61.6	22.72	549	68.72	23.88	7.12	2082	63.48	23.24	6.07
	Girls	1192	58.95	23.42	517	62.31	24.24	3.36	1709	59.96	23.72	2.66
	Diff.		2.65			6.41				3.52		
	Total	2725	60.44	23.06	1066	65.61	24.26	5.17	3791	61.89	23.52	5.98
	CR Value		2.97			4.35				4.59		
Compre- hension	Boys	1533	51.96	23.37	549	56.95	24.9	4.99	2082	53.28	23.88	4.09
	Girls	1192	49.25	23.41	517	54.52	24.08	5.27	1709	50.84	23.73	4.19
	Diff.		2.71			2.43				2.44		
	Total	2725	50.78	23.42	1066	55.77	24.53	4.99	3791	52.18	23.84	5.7
	CR Value		3			1.62				3.14		

The data reveals that achievement of urban students, both boys and girls, was significantly better than their counterparts in rural areas. In both rural and urban areas, performance of boys was significantly better than girls.

Reading Comprehension

The data reveals that achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. The achievement of rural boys was significantly better than rural girls.

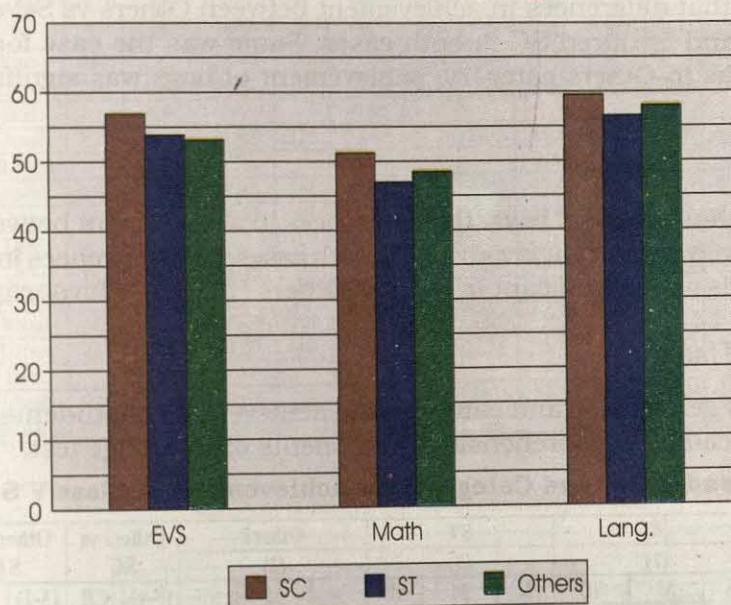
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

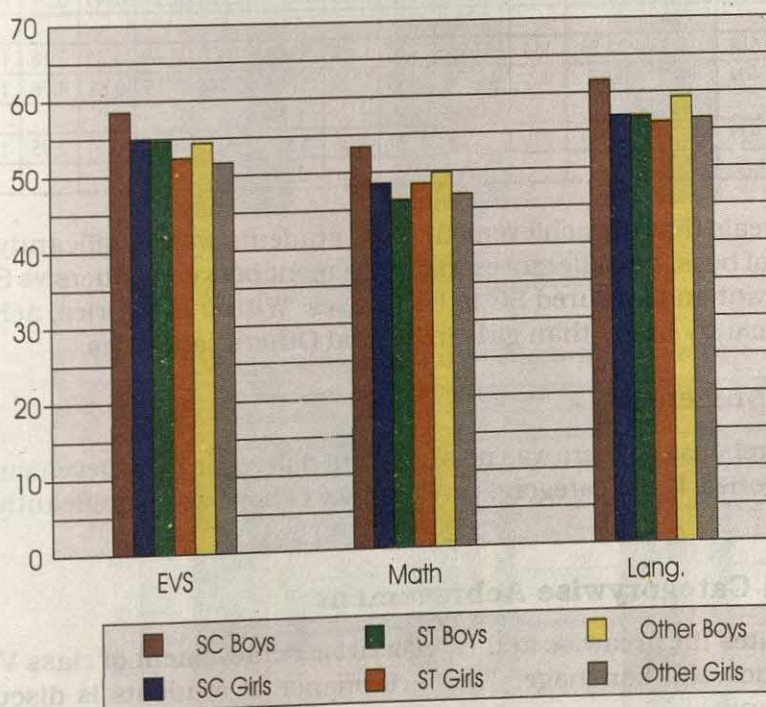
Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	518	58.53	23.33	144	54.69	24.46	1420	54.35	23.55	-4.18	-3.48	-0.34	-0.16	-3.84	-1.68
	Girls	409	54.82	22.51	82	52.35	24.08	1218	51.68	23.2	-3.14	-2.42	-0.67	-0.24	-2.47	-0.86
	Diff.		3.71			2.34			2.67							
	Total	927	56.9	23.03	226	53.84	24.29	2638	53.12	23.42	-3.78	-4.28	-0.72	-0.43	-3.06	-1.72
	CR Value		2.45			0.70			2.93							
Mathematics	Boys	518	53.33	23.58	144	46.2	25.97	1420	49.78	22.5	-3.55	-2.97	3.58	1.59	-7.13	-2.97
	Girls	409	48.47	22.9	82	48.3	26.15	1218	46.88	21.46	-1.59	-1.23	-1.42	-0.48	-0.17	-0.05
	Diff.		4.86			-2.1			2.9							
	Total	927	51.18	23.39	226	46.96	25.99	2638	48.45	22.07	-2.73	-3.1	1.49	0.84	-4.22	-2.23
	CR Value		3.17			0.58			3.38							
Language	Boys	518	61.62	22.36	144	56.79	21.89	1420	59.23	21.72	-2.39	-2.1	2.44	1.28	-4.83	-2.33
	Girls	409	56.91	22.61	82	55.95	23.66	1218	56.46	21.37	-0.45	-0.35	0.51	0.19	-0.96	-0.34
	Diff.		4.71			0.84			2.77							
	Total	927	59.54	22.58	226	56.48	22.5	2638	57.95	21.6	-1.59	-1.86	1.47	0.95	-3.06	-1.83
	CR Value		3.17			0.26			3.29							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that achievement of SC students, both boys and girls was significantly better than their counterparts i.e., Others. In SC and Others categories, performance of boys was significantly better than girls.

Mathematics

The data reveals that differences in achievement between Others vs SC and ST vs SC were significant and favoured SC in both cases. Same was the case for boys. In SC category as well as in Others category, achievement of boys was significantly better than girls.

Language

The data reveals that in case of boys, the differences in achievement between Others vs SC and ST vs SC were significant favouring SC both cases. The differences in achievement in of boys and girls were significant in SC and Others categories favouring boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	518	65.78	23.34	144	60.36	24.21	1420	62.95	23.05	-2.83	-2.37	2.59	1.23	-5.42	-2.39
	Girls	409	60.93	24.75	82	61.56	25.22	1218	59.53	23.26	-1.4	-1	-2.03	-0.71	0.63	0.21
	Diff.		4.85			-1.2			3.42							
	Total	927	63.64	24.08	226	60.8	24.53	2638	61.37	23.21	-2.27	-2.49	0.57	0.34	-2.84	-1.57
	CR Value		3.04			0.35			3.78							
Reading Comprehension	Boys	518	54.7	24.56	144	50.83	23.02	1420	53.01	23.7	-1.69	-1.35	2.18	1.08	-3.87	-1.76
	Girls	409	50.2	24.2	82	46.59	25.17	1218	51.35	23.46	1.15	0.84	4.76	1.66	-3.61	-1.19
	Diff.		4.5			4.24			1.66							
	Total	927	52.71	24.49	226	49.29	23.86	2638	52.24	23.6	-0.47	-0.51	2.95	1.79	-3.42	-1.92
	CR Value		2.79			1.26			1.80							

The data reveals that the achievement of SC students was significantly better than Others. In case of boys, the differences in achievement between Others vs SC and ST vs SC were significant and favoured SC in both cases. Within categories, achievement of boys was significantly better than girls in SC and Others categories.

Reading Comprehension

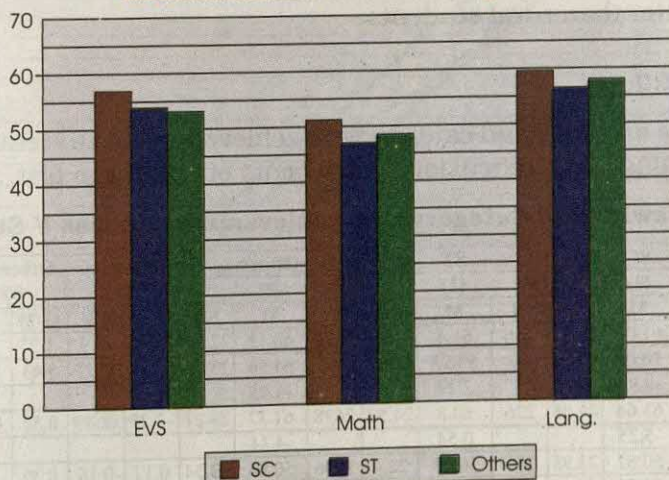
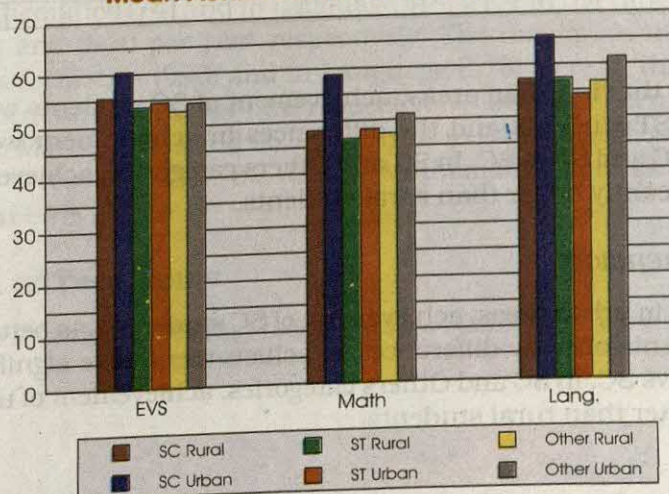
In reading comprehension, there was no significant difference in achievement of students across the categories. In SC category, performance of boys was significantly better than girls.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Rural	663	55.5	22.49	166	53.61	23.98	1896	52.68	23.12	-2.82	-2.76	-0.93	-0.48	-1.89	-0.92
	Urban	264	60.41	24.02	60	54.46	25.35	742	54.26	24.15	-6.15	-3.57	-0.2	-0.06	-5.95	-1.66
	Diff.		-4.91			-0.85			-1.58							
	Total	927	56.9	23.03	226	53.84	24.29	2638	53.12	23.42	-3.78	-4.28	-0.72	-0.43	-3.06	-1.72
	CR Value		2.86			0.23			1.53							
Mathematics	Rural	663	48.15	22.48	166	46.48	24.74	1896	47.42	21.74	-0.73	-0.73	0.94	0.47	-1.67	-0.79
	Urban	264	58.79	23.95	60	48.29	29.38	742	51.06	22.68	-7.73	-4.57	2.77	0.71	-10.5	-2.58
	Diff.		-10.64			-1.81			-3.64							
	Total	927	51.18	23.39	226	46.96	25.99	2638	48.45	22.07	-2.73	-3.1	1.49	0.84	-4.22	-2.23
	CR Value		-6.21			-0.43			-3.75							
Language	Rural	663	57.18	22.24	166	57.3	20.32	1896	56.65	21.42	-0.53	-0.53	-0.65	-0.39	0.12	0.07
	Urban	264	65.47	22.37	60	54.21	27.71	742	61.28	21.7	-4.19	-2.63	7.07	1.93	-11.26	-2.94
	Diff.		-8.29			3.09			-4.63							
	Total	927	59.54	22.58	226	56.48	22.5	2638	57.95	21.6	-1.59	-1.86	1.47	0.95	-3.06	-1.83
	CR Value		-5.10			0.79			-4.95							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Areawise**

Environmental Studies

The data reveals that in rural as well as urban areas, differences in achievement were significant between Others vs SC only and favoured SC students. In SC category, urban students performed significantly better than rural students.

Mathematics

The data reveals that in urban areas, achievement of SC was better than Others followed by ST students and the differences in achievement were significant between Others vs SC and ST vs SC. Within categories, achievement of urban students was better than rural students and differences in achievement were significant in SC and Others categories.

Language

The data reveals that in urban areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs SC and ST vs SC. In SC and Others categories, achievement of urban students was significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	663	61.09	23.94	166	61.4	22.31	1896	60.13	22.82	-0.96	-0.9	-1.27	-0.7	0.31	0.16
	Urban	264	70.05	23.26	60	59.13	29.98	742	64.56	23.89	-5.49	-3.27	5.43	1.37	-10.92	-2.65
	Diff.		-8.96			2.27			-4.43							
	Total	927	63.64	24.08	226	60.8	24.53	2638	61.37	23.21	-2.27	-2.49	0.57	0.34	-2.84	-1.57
	CR Value		-5.25			0.54			-4.34							
Reading Comprehension	Rural	663	50.67	23.93	166	50.48	22.4	1896	50.84	23.34	0.17	0.16	0.36	0.2	-0.19	-0.1
	Urban	264	57.85	25.17	60	46	27.44	742	55.82	23.88	-2.03	-1.14	9.82	2.69	-11.85	-3.06
	Diff.		-7.18			4.48			-4.98							
	Total	927	52.71	24.49	226	49.29	23.86	2638	52.24	23.6	-0.47	-0.51	2.95	1.79	-3.42	-1.92
	CR Value															

The data reveals that in urban areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs SC and ST vs SC. In SC and Others categories, achievement of urban students was significantly better than rural students.

Reading Comprehension

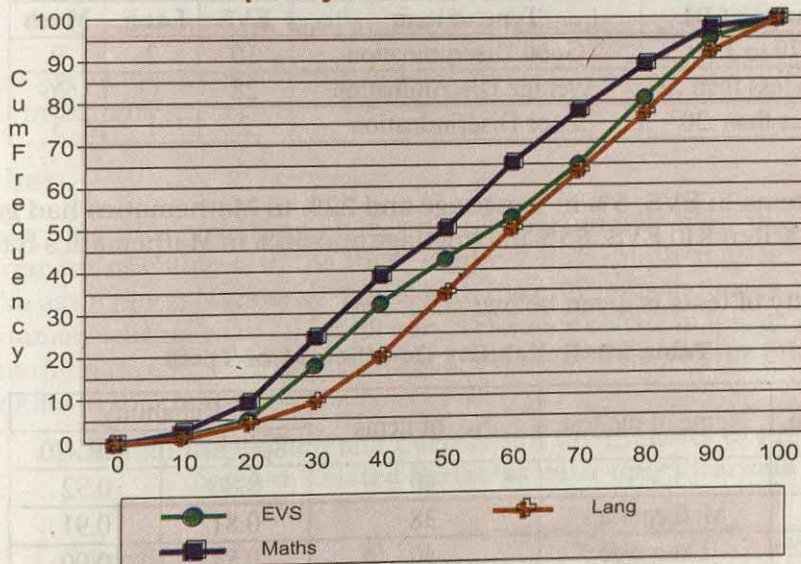
The data reveals that in urban areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In SC and Others categories, achievement of urban students was significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	60	147	479	550	397	373	477	597	540	171
	cf	60	207	686	1236	1633	2006	2483	3080	3620	3791
	cf(%)	1.58	5.46	18.10	32.60	43.08	52.90	65.50	81.25	95.47	100
Math	f	104	255	579	546	421	590	472	417	333	74
	cf	104	359	938	1484	1905	2495	2967	3384	3717	3791
	cf(%)	2.74	9.47	24.74	39.15	50.25	65.81	78.26	89.26	98.05	100
Language	f	48	120	189	399	566	574	518	525	558	294
	cf	48	168	357	756	1322	1896	2414	2939	3497	3791
	cf(%)	1.27	4.43	9.42	19.94	34.87	50.01	63.68	77.53	92.24	100

Frequency Distribution of Students



The figures posted in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 percent. The least number of cases in EVS (60), in Mathematics (74) and in Language (48) were in the range of 0-10 per cent, 90-100 per cent and 0-10 per cent respectively. The maximum number of cases in EVS (597), in Mathematics (590) and in Language (574) were in the range 70-80 per cent, 50-60 per cent and 50-60 per cent respectively. 56.92 per cent students in EVS, 49.75 per cent in Mathematics and 65.13 per cent in Language scored more than 50% marks whereas 47.10% in EVS, 34.19% in Mathematics and 49.99% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	0	3
25 to less than 50	Difficult	13	10	15
50 to less than 75	Average	25	24	20
75 to 100	Very Easy	1	6	0

About 32% items in EVS, 25% in Language and 37% in Mathematics were difficult. In Mathematics only 15% items were very easy. But 62% items in EVS, 60% in Language and 50% in Mathematics were show average difficulty.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	10	2	9
.30 to less than .70	Average Discrimination	28	37	26
Less than .30	Poor Discrimination	2	1	3

Only 25% items in EVS, 5% in Language and 22% in Mathematics had good value of DI. About 70% items in EVS, 65% in Language and 50% in Mathematics had average value of DI.

The reliability of tests is given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.86	0.92
2	Mathematics	38	0.81	0.91
3	Language	40	0.84	0.90

Reliability co-efficient of EVS, Math and Language are 0.86, 0.81 and 0.84 respectively indicated that the test is highly reliable.

IMPACT OF INTERVENING VARIABLES

School

By and large teaching aids, Community participation, physical facility and teaching time in school influence the learning achievement of children in the three subjects EVS, Mathematics and Language. The positive association of the teaching aids which comprises maps, globes, charts, play material, science and mathematics kits, and physical facility and teaching time have helped the children in improving their learning achievement in the three subjects EVS, Mathematics and Language.

Table 27: Regression and Correlation Coefficients of Predictors of School Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	67.180	--	75.146	--	66.112	--
PTR	-0.019	-0.037	-0.026	-0.009	-0.060*	-0.061
Com_Participation	4.341*	0.181**	2.933	0.140*	3.935	0.183**
Teach-aid	1.181*	0.207**	0.802	0.184**	1.213*	0.253**
Physical facility	0.695	0.149*	1.022	0.163*	0.936	0.206**
Ancillary facility	0.104	0.013	0.307	0.009	0.017	0.083
Instructional time	0.067*	0.087**	0.082**	0.021**	0.061*	0.102**
Working day	0.073	0.048	0.102	0.068	0.051	0.044
Index-Comp. TLM	0.652	0.027	0.042	0.013	0.173	0.063
R²	0.096		0.096		0.128	

*Significant level at 0.05 **Significant level at 0.01

The predictors explain 9.6% of total variance in EVS, 9.6% in Mathematics and 12.8% in Language.

Teacher

The teaching aids, teaching style, and teacher qualification influence the learning achievement of children in the three subjects EVS, Mathematics and Language. The positive association of these variables with the criteria indicates that use of teaching aids, namely teacher's guides, dictionary, reference books, maps, globes, charts, science and mathematics kits, giving of homework and have helped the children in improving their skills in the three subjects.

Table 28: Regression and Correlation Coefficients of Predictors of Teacher Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	59.452	--	48.372	--	62.184	--
Index-Qualification	3.572	0.127*	4.002*	0.129*	4.104*	0.148**
Index-Experience	0.551	0.051	2.486	0.097	0.539	0.045
Index-Teaching Aid	8.273**	0.213**	6.281**	0.193**	0.998**	0.181**
Index-School Org.	0.374	0.010	0.048	0.047	0.274	0.010
R²	0.058		0.052		0.050	

*Significant level at 0.05 **Significant level at 0.01

The predictors explain 5.8% of total variance in EVS, 5.2% in Mathematics and 5.0% in Language independently.

Pupil

The teaching-learning processes in the school, schooling practices, percentage attendance of children in school and age of students' influence learning achievement of students in all the three subjects i.e., EVS, Mathematics and Language. The positive association of these three variables with the criteria indicates that active-involvement of teachers in class have helped the children in improving their learning skills in the

three subjects. Attending the school regularly also help the children in improving their learning achievement in the three subjects. Children in higher age group perform poorly.

Table 29: Regression and Correlation Coefficients of Predictors of Pupil Related Variables with the Criterions

*Significant level at 0.05 **Significant level at 0.01

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	33.434	--	37.877	--	26.370	--
Index-Ed & Occu	0.800	0.055**	1.352*	0.072**	2.769**	0.111**
Index-Schooling	2.768**	0.095**	2.732**	0.102**	2.648**	0.117**
Index-TLP	10.480**	0.289**	9.880**	0.281**	10.586**	0.315**
Age	-0.253**	-0.053**	-0.667	-0.032*	-0.635**	-0.070**
Detention	-0.373*	-0.029	-0.164	-0.021	-0.399	-0.008
Attendance	0.092**	0.044**	0.059	0.033**	0.176**	0.088
R²	0.09.		0.087		0.124	

The predictors explain 9.3% of total variance in EVS, 8.7% in Mathematics and 12.4% in Language.

One can infer from the above analysis that active involvement of teachers in class, use of teaching aids by teachers in the school, participation of community, teacher's training and teacher experience at primary level helped the children in improving their learning skills in the three subjects EVS, Language and Mathematics. Academic assistance provided by family members and attending school regularly also help the children in improving their learning skills in the three subjects.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Madhya Pradesh out of 5 districts, only Bhopal is the non-DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP Wise achievement of Class V Students

The data reveals that in all the three subjects, the achievement of students of Bhopal,

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	1615	54.73	24.35	467	57.8	20.72	2.71
	Girls	1270	51.08	23.6	439	56.48	21.13	4.48
	Diff.		3.65			1.32		
	Total	2885	53.12	24.09	906	57.16	20.92	4.88
	CR Value		4.07			0.95		
Mathe- matics	Boys	1615	49.45	24.16	467	53.76	18.55	4.11
	Girls	1270	46.64	23.29	439	49.32	17.86	2.5
	Diff.		2.81			4.44		
	Total	2885	48.22	23.82	906	51.61	18.35	4.5
	CR Value		3.16			3.67		
Language	Boys	1615	58.14	22.86	467	64.88	17.34	6.85
	Girls	1270	55.38	22.5	439	59.91	19.12	4.08
	Diff.		2.76			4.97		
	Total	2885	56.92	22.74	906	62.48	18.39	7.48
	CR Value		3.25			4.09		

which is a non-DPEP district was significantly better than students of DPEP districts.

HARD SPOT OF LEARNING

In EVS, item No. 21 was found very difficult and 13(32%) items were found difficult. The hard spots were found in climatic conditions at varying attitude identification of boundaries with neighbouring countries, recognition of first President of India, system of governance in India, knowledge of UN days, knowledge of solar system, planets etc, understanding of eclipse, knowledge of composition of air, effect of weather conditions on human bodies, knowledge of soil erosion, identification of simple machine, conservation of wild animals and knowledge of carrier of diseases.

Likewise, no item was found very difficult in Language. However, 10(25%) items were found difficult. The hard spots in Language were comprehension of instructions, time table, informatical passage and comprehension of story.

In Mathematics, item No. 29, 35 and 37 were found very difficult and 15 (37%) items were found difficult. The hard spots in Mathematics were HCF, division, triangle according to angles, descending/ascending order, simplification, word problems on subtraction, conversion from percent to fraction, percent, word problem on percent, subtraction of fraction, triangle according to sides and circle-radius-diameter concept.

FINDINGS

Analysis of the results signified that

- Male teachers were more in rural schools and females were more in urban schools in the total sampled teachers.
- Maps and charts were available in 80% schools.
- Musical instruments were available in 10% schools.
- School bell, black board, chairs for teachers, chalk and dusters were available in 90% and more schools
- TV was available in 5% school.
- Pre-schools were attached only to primary and upper primary school.
- More Teaching Aids were available for primary classes in 2001 as compared to year 1998.
- Average number of working days in schools was approximately 220.
- Almost all schools in rural areas were having Village Education Committees.
- SMC was more in terms of percentage in schools located in urban areas than schools in rural areas.
- PTA was more than in 90% schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was lower in rural schools than urban schools.
- Percentage of PG degree holder female teachers was more than male teachers in science, language and social sciences.
- Percentage of male teachers studied Mathematics, Science, Language and Social Science was more than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted by Block Resource Centre and only one by SCERT.
- Maximum in-service training programmes were conducted on 'Assessment of Pupil learning' and minimum on 'Use of Instructional Material', during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 8% teachers have not attended any in-service training programme during

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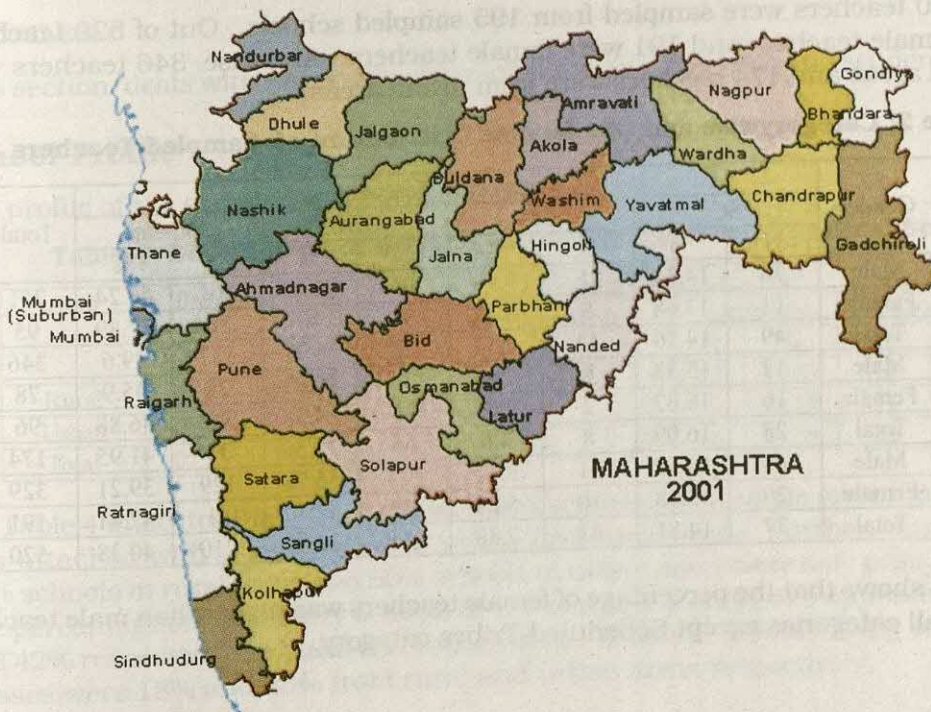
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- Approximately, 8% teachers have not attended any in-service training programme during

last three years.

- In most of cases teachers were getting assistance always from 'Head of Schools'.
- For 99% students medium of instructions in the school was same as the language spoken at home.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general, educational qualification of mother was poorer than father.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Number of fathers who were working as skilled worker and mothers who were housewives in urban areas was more than fathers and mothers associated with different occupations.
- No mother was employer in urban areas.
- Students were getting more academic assistance from father/guardian than other family members.
- In rural areas, girls were getting more academic assistance than boys from all.
- Approximately, 88% students were attending schools above 70% working days.
- Approximately, 4% students were attending schools below 60% of the total working days.
- Girls were attending schools more than boys between 70%-90% of the total working days.
- Achievement of rural as well as urban boys was significantly better than girls across the subjects.
- Performance of urban students was significantly better than students of rural areas.
- In Language, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of SC category was better than Others and ST students.
- In rural areas, performance of SC students was better than students of ST and Others category in EVS and Mathematics.
- In urban areas, performance of students of SC category was better than Others and ST students.
- Computer was available in only 4% schools.
- Competency based teaching materials were more available in the 2001 than previous year.
- Active involvement of teachers in the class, use of teaching aids by teachers in school, participation of community, teacher's training help the children in improving their learning skills in the three subjects.
- Attending school regularly by the students also help the children in improving their skills in the three subjects.
- Performance of students from Non DPEP districts was significantly better than students of DPEP districts in all three subjects.

INTRODUCTION

The Government of Maharashtra has realised the importance of universalisation of primary education. Serious efforts have been made by the state for quality education such as opening of large number of schools, appointment of large number of primary teachers, organisation of training programmes for teachers and development of teaching-learning material. As per educational statistics (2001-2002), the number of primary schools having Vth standard is 20,822. The total number of primary teachers in the state is 3.14 lakhs. The number of students enrolled in primary schools is 120.65 lakhs approximately. A primary school is mostly within a distance of one km. The minimum number of working days in one academic year is 220 days. The minimum working hours per day are 6 hours. There are 34 districts in the state.



The competency based curriculum, textbooks and continuous comprehensive evaluation system has been implemented since 1997 in phased manner for Class I to Vth in all primary schools. For effective evaluation of the students has given emphasis on the development of evaluation tools and organisation of training programmes regarding evaluation. MSCERT, Pune has developed the tools for competency based evaluation of the students.

SAMPLE

- The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 195 schools were sampled from Amravati, Beed, Mumbai and Satara districts of Maharashtra. Out of total sampled schools, 50 schools were from Amravati, 50 from Beed, 45 from Mumbai and remaining 50 from Satara.

Areawise and management wise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	129	3	2.33	86	66.67	40	31.01
Urban	66	2	3.03	10	15.15	54	81.82
Total	195	5	2.56	96	49.23	94	48.21

Teachers

A total 520 teachers were sampled from 195 sampled schools. Out of 520 teachers, 329 were male teachers and 191 were female teachers. Areawise, 346 teachers were from rural areas and 174 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	36	14.34	25	9.96	89	35.46	101	40.24	251
	Female	13	13.68	8	8.42	38	40	36	37.89	95
	Total	49	14.16	33	9.54	127	36.71	137	39.6	346
Urban	Male	12	15.38	6	7.69	32	41.03	28	35.9	78
	Female	16	16.67	2	2.08	33	34.38	45	46.88	96
	Total	28	16.09	8	4.6	65	37.36	73	41.95	174
Total	Male	48	14.59	31	9.42	121	36.78	129	39.21	329
	Female	29	15.18	10	5.24	71	37.17	81	42.41	191
	Total	77	14.81	41	7.88	192	36.92	210	40.38	520

Table 2 shows that the percentage of female teachers was higher than male teachers in case of all categories except Scheduled Tribes category.

Students

A total number of 4,981 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Amaravati	Rural	433	485	918
	Urban	140	160	300
	Total	573	645	1218
Beed	Rural	520	430	950
	Urban	115	114	229
	Total	635	544	1179
Mumbai	Rural	174	156	330
	Urban	513	464	977
	Total	687	620	1307
Satara	Rural	463	487	950
	Urban	163	164	327
	Total	626	651	1277
Total	Rural	1590	1558	3148
	Urban	931	902	1833
	Total	2521	2460	4981

Out of 4,981 students, 3,148 students were from rural areas and remaining 1,833 students were from urban areas. Out of the total sample, 2,521 were boys and 2,460 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	0	0	69	53.49	72	55.81	23	17.83	12	9.3
Urban	0	0	33	50.00	28	42.42	23	34.85	11	16.67
Total	0	0	102	52.31	100	51.28	46	23.59	23	11.79

Table 4 indicates that out of 195 sampled schools, not a single pre-primary schools was attached with schools in both urban and rural areas. Further, approximately 53% schools in rural areas and 50% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 56% and 42% respectively for rural and urban areas. Besides, school having sr. secondary classes were 18% and 35% from rural and urban areas respectively.

Facilities related to teaching-learning process

It was observed that maps, globes, charts, play material and toys, maths kits and children's books were available in more than 90% schools. Magazines, journals and newspapers game equipments, primary science kits, reference books, dictionaries, encyclopedia, etc., were available in 80% to 88% schools.

Infrastructural facilities

It was observed that school bell, blackboard and chairs for teachers were available in 95% to 99% schools, whereas, tables for teachers, pin up board/notice board, water pitcher, ladel and glasses, and dustbins were available in 85% to 89% schools. Besides, play ground and musical instrument for students were available in 74% and 76% schools respectively. Chalk and dusters were available in all schools.

Ancillary Facilities

Computer and TV were available 30% and 42% schools, respectively. Separate toilet for girls, toilet facility and immunisation facilities were available in 59% to 65% schools. Besides, first-aid-kit and electric connection were available in 76% to 79% schools. But, Safe drinking water facility and Annual medical check-up facility were available in 88% and 90% schools.

Competency based Teaching Materials

Information gathered shows that out of 195 schools, competency based teaching aids were available in more schools, than textbooks, workbooks and teachers' handbook. Workbooks were available in lesser number of schools as compared with others. However, textbooks and teaches' handbook were available in approximately same number of schools.

Workbooks were available in 16 to 20 schools in the year 2001 as compared with none to 7 schools in the year 1998 for Classes I to IV. The picture in Class V was some different wherein work books were available in 50 schools in the year 2001. The teachers' handbooks were available in 39 to 48 schools in the year 2001 but only in 4 to 17 schools in the year 1998 for I to IV Classes. However, for Class V this number was 69 in the year 2001. Teaching aids were available in 60 to 67 schools in 2001, but only in 4 to 15 schools in 1998 for Classes I to IV. However, the same aids were available in 102 schools for Class V in the year 2001.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	3578	3519	1919	1739	3464	3046	3608	3290	12569	11594
	%	28.47	30.35	15.27	15.00	27.56	26.27	28.71	28.38	100	100
Free uniform	N	1092	1211	694	742	854	894	953	870	3593	3717
	%	30.39	32.58	19.32	19.96	23.77	22.84	26.52	23.41	100	100
Free textbooks	N	3750	3846	1751	1675	2926	3214	3957	3812	12384	12547
	%	30.28	36.65	14.14	13.35	23.63	25.62	31.95	30.38	100	100
Scholarship for regular attendance	N	67	873	78	582	10	324	33	174	188	1953
	%	35.64	44.70	41.49	29.80	5.32	16.59	17.55	8.91	100	100
Other Schemes	N	586	1036	246	188	974	1058	814	754	2620	3036
	%	22.37	34.12	9.39	6.19	37.18	34.85	31.07	24.84	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, free uniform, free textbooks and other schemes both boys and girls from SC and Others categories were more benefited. But scholarship for regular attendance both boys and girls from SC and ST categories were available.

Instructional Time

Average number of working days in schools was approximately 222 days. On an average, schools were having 8 periods in a day of approximately of 36 minutes duration. Further, maximum number of working days were in Beed and minimum were in Mumbai district which was, approximately 232 and 209 days respectively.

Educational Committees

The data given in the Table 6 reveals that out of total 195 rural schools, 119(61.03%) schools were having Village Education Committees (VEC). School Management Committee was observed in 116 (59.49%) schools, Area Education Committee was observed in 71 (36.41) schools and Parent Teacher Association observed in 154(78.97%) schools located in rural and urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	99	20	119
	%	76.74	30.3	61.03
AEC	N	45	26	71
	%	34.88	39.39	36.41
SMC	N	71	45	116
	%	55.04	68.18	59.49
PTA	N	101	53	154
	%	78.29	80.3	78.97

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	129	681	58.45	484	41.55	1165	9	36
Urban	66	317	40.18	472	59.82	789	12	41
Total	195	998	51.07	956	48.93	1954	10	37

Table 7 shows that overall number of male teachers was slightly higher than female teachers. The number of female teachers in schools in urban areas was more than male teachers. The trend was reverse in rural schools. The average number of teachers per school in rural and urban areas was 9 and 12 respectively. Further, average teacher pupil ratio was 37:1, however, this ratio was approximately 41:1 in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. This trend was reverse for teachers holding Sr. Secondary Certificate. Besides, only 2% male teachers and 7% female teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	7	2.13	89	27.05	67	20.36	127	38.6	39	11.85	329
Female	13	6.81	47	24.61	45	23.56	58	30.37	28	14.66	191
Total	20	3.85	136	26.15	112	21.54	185	35.58	67	12.88	520

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e. Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	11	3.34	228	69.3	74	22.49	16	4.86	329
	Female	11	5.76	140	73.3	35	18.32	5	2.62	191
	Total	22	4.23	368	70.77	109	20.96	21	4.04	520
Science	Male	8	2.43	231	70.21	64	19.45	26	7.9	329
	Female	12	6.28	138	72.25	31	16.23	10	5.24	191
	Total	20	3.85	369	70.96	95	18.27	36	6.92	520
Language (Medium)	Male	2	0.61	138	41.95	92	27.96	97	29.48	329
	Female	9	4.71	62	32.46	63	32.98	57	29.84	191
	Total	11	2.12	200	38.46	155	29.81	154	29.62	520
Social Science	Male	12	3.65	159	48.33	61	18.54	97	29.48	329
	Female	10	5.24	96	50.26	42	21.99	43	22.51	191
	Total	22	4.23	255	49.04	103	19.81	140	26.92	520

The data reveals that in Mathematics, Science and Social Science, the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this was nearly same in case of Science. Similarly, the percentage of male teachers who studied Mathematics and Science upto higher secondary level was more than female teachers. But, this trend was reverse for Language and Social Science. Besides, the percentage of male teachers who studied Mathematics and Science below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
195	Male	240	88	5
	Female	153	53	3
	Total	393	141	8

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few teachers were having M.Ed degree. Besides, approximately, 28% teachers had B.Ed. qualification.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. Information collected indicates that all teaching aids were available to more than 85% teachers in urban schools except others and to more than 89% teachers in rural schools, except maths kit.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	3
	%	0.58
2. Block Resource Centre	N	77
	%	14.81
3. Teacher Resource Centre	N	14
	%	2.69
4. Cluster Resource Centre	N	28
	%	5.38
5. DIET	N	105
	%	20.19
6. SCERT	N	161
	%	30.96
7. Others	N	37
	%	7.12

The in-service training programme were organised in the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Some teachers attended the training programme organised by the DIET, SCERT and BRC.

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Competency Based Teaching-Learning and it was followed by 'General Training'. Minimum programmes were conducted on 'Use of Instructional Material'. However, various others training programmes (159) were organised in the state.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	41
2. Content Enrichment	13
3. Production of Instructional Material	40
4. Use of Instructional Material	9
5. Assessment of Pupil Learning	19
6. Competency based Teaching Learning	145
7. Activity based Joyful Learning	34
8. Others	159

Out of total 520 sampled teachers, 176(33.85%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was almost same. However, percentage of female teachers both in urban and rural schools who had not attended any in-service training programme was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	219	157	185	153
	%	63.66	45.64	53.78	44.48
Average	N	123	164	149	173
	%	35.76	47.68	43.31	50.29
Low	N	2	23	10	18
	%	0.58	6.69	2.91	5.23

It is evident that approximately 36% training programmes were averagely effective in terms of utility of knowledge gained during training programmes. However, 64% programmes were rated as 'Highly' useful. The impact of these training programmes was rated as average by 43% to 50% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 45% to 54% teachers.

Academic Assistance received from Various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School'. It was followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 90% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	156	03.13	119	02.39
1. Illiterate	655	13.15	1502	30.15
2. Literate	300	6.02	295	05.92
3. Primary	712	14.29	789	15.84
4. Secondary	2331	46.80	1989	39.93
5. Sr. Secondary	559	11.22	206	04.14
6. Degree and above	226	04.54	62	1.24
7. Donot Know/ Cannot say	42	0.84	19	0.38

Table 14 indicates that approximately 13% father and 30% mother of the students were illiterate. Only approximately 5% father and 1% mother were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	120	84	204	203	143	346
Household/ Housewife	16	13	29	1422	1190	2612
Farmer	1403	167	1570	744	41	785
Poultry farming	4	2	6	0	14	14
Agricultural labour	489	81	570	574	67	641
Picking forest produce	3	3	6	2	0	2
Domestic Servent	27	26	53	38	94	132
Street Vender	29	47	76	11	24	35
Manual unskilled worker	199	291	490	29	61	90
Skilled worker	336	425	761	21	39	60
Clerical worker	74	122	196	11	14	25
Shopkeeper	76	96	172	10	16	26
Employer	71	67	138	6	1	7
Manager/Senior Officer	119	146	265	19	22	41
Others	182	263	445	58	107	165

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mother and approximately 5% fathers were Manager/Senior Officers. Number of Manager/Senior Officer father and mother was more in rural areas than urban areas. In decreasing order, fathers were working as farmer, skilled worker, agricultural labour, manual unskilled worker, others, manager, senior officer, clerical worker and shopkeeper etc. In decreasing order mothers were working as household/housewives, farmer, agricultural labour, others, domestic servant, manual unskilled worker, skilled worker and manager/senior officer etc.

Academic Assistance from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	627	571	354	383	981	954
	%	39.43	36.65	38.02	42.46	38.91	38.78
Mother	N	407	408	361	363	768	771
	%	25.6	26.19	38.78	40.24	30.46	31.34
Elder Brother/Sister	N	587	626	373	388	960	1014
	%	36.92	40.18	40.06	43.02	38.08	41.22
Family Members and Others	N	111	126	90	103	201	229
	%	6.98	8.09	9.67	11.42	7.97	9.31

Girls were getting more help from Elder brother/sister and boys were getting help from father/guardian. The trend was also same in rural areas. However, in urban areas boys were getting more help from father/guardian and girls from elder brothers/sisters. The descending order of academic assistance provided by the family members was elder brother and sisters, father/guardian and mothers in case of girls. But in case of boys it was father/guardian, elder brother/sister, mother and others.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was more than boys. Only 1-2% percent boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Maharashtra. The language test has two components, namely Grammar and Usage, and Reading Comprehension. In terms of mean percentage, the performance of students

areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

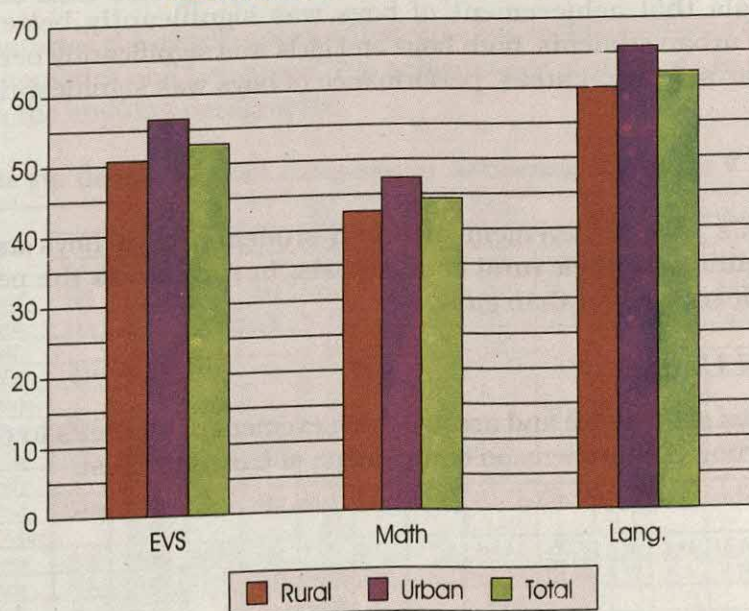
Genderwise and Areawise Achievement

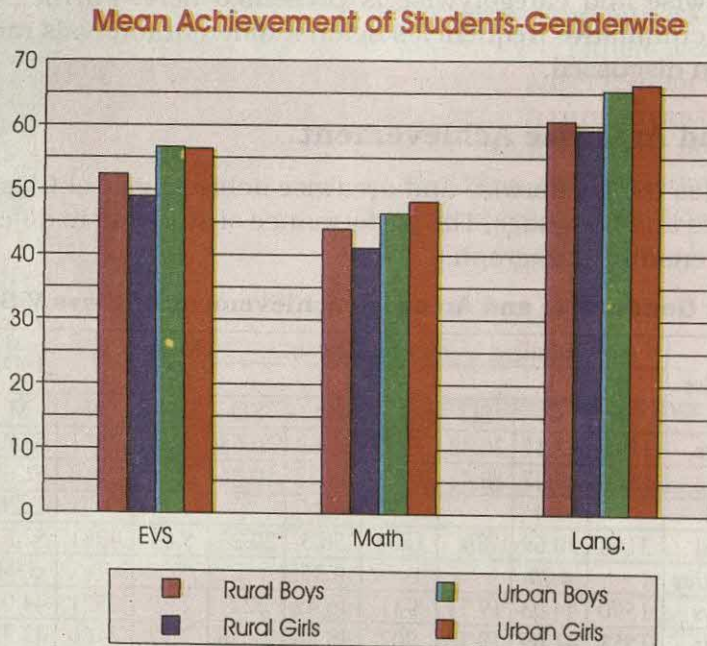
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1590	52.37	20.42	931	56.62	20.68	4.25	2521	53.94	20.62	5
	Girls	1558	48.97	19.41	902	56.38	19.76	7.41	2460	51.68	19.86	9.02
	Diff.		3.4			0.24				2.26		
	Total	3148	50.69	20	1833	56.5	20.23	5.81	4981	52.82	20.27	9.82
	CR Value		4.79			0.25				3.94		
Mathematics	Boys	1590	44.03	19.31	931	46.42	22.8	2.39	2521	44.91	20.7	2.68
	Girls	1558	41.09	19.13	902	48.26	22.58	7.17	2460	43.72	20.75	8.02
	Diff.		2.94			-1.84				1.19		
	Total	3148	42.58	19.28	1833	47.33	22.71	4.75	4981	44.32	20.73	7.52
	CR Value		4.29			-1.74				2.03		
Language	Boys	1590	60.66	19.6	931	65.31	21.14	4.65	2521	62.38	20.31	5.47
	Girls	1558	59.3	19.26	902	66.27	20.2	6.97	2460	61.86	19.89	8.39
	Diff.		1.36			-0.96				0.52		
	Total	3148	59.99	19.44	1833	65.78	20.68	5.79	4981	62.12	20.1	9.74
	CR Value		1.96			-0.99				0.91		

Mean Achievement of Students-Areawise





Environmental Studies

The data reveals that achievement of boys was significantly better than girls. Achievement of urban students, both boys and girls was significantly better than their rural counterparts. In rural areas, performance of boys was significantly better than girls.

Mathematics

The data reveals that achievement of boys was significantly better than girls. Achievement of urban students, both boys and girls was significantly better than their rural counterparts. In rural areas, performance of boys was significantly better than girls.

Language

The data reveals that achievement of urban students, both boys and girls, was significantly better than their rural counterparts. In rural areas the performance of boys was significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Gram- mar & Usage	Boys	1590	65.59	20.75	931	69.75	21.17	4.16	2521	67.13	21	4.8
	Girls	1558	63.5	19.96	902	69.96	20.14	6.46	2460	65.87	20.27	7.69
	Diff.		2.09			-0.21				1.26		
	Total	3148	64.56	20.39	1833	69.85	20.67	5.29	4981	66.51	20.65	8.75
	CR Value		2.88			-0.22				2.15		
Compre- hension	Boys	1590	52.45	22.59	931	57.91	25.34	5.46	2521	54.47	23.79	5.43
	Girls	1558	52.3	23.18	902	60.12	24.21	7.82	2460	55.17	23.85	7.84
	Diff.		0.15			-2.21				-0.7		
	Total	3148	52.38	22.88	1833	59	24.81	6.62	4981	54.81	23.82	9.34
	CR Value		0.18			-1.91				-1.04		

The data reveals that achievement of boys was significantly better than girls. The achievement of urban students, both boys and girls was significantly better than their rural counterparts. In rural areas performance of boys was significantly better than girls.

Reading Comprehension

The data reveals that achievement of urban students, both boys and girls was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement between boys and girls.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

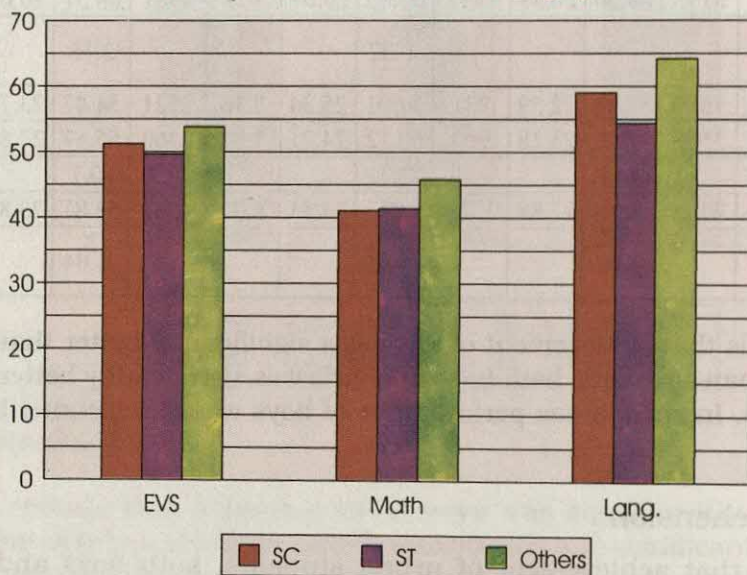
Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	508	51.24	21.23	261	49.8	21.22	1752	55.34	20.19	4.1	3.87	5.54	3.96	-1.44	-0.89
	Girls	518	51.14	20.75	230	49.38	21.62	1712	52.16	19.31	1.02	1	2.78	1.85	-1.76	-1.04
	Diff.		0.1			0.42			3.18							
	Total	1026	51.19	20.98	491	49.6	21.39	3464	53.77	19.82	2.58	3.5	4.17	4.08	-1.59	-1.36
	CR Value		0.08			0.22			4.74							
Mathe- matics	Boys	508	40.83	20.33	261	42.72	18.68	1752	46.43	20.91	5.6	5.43	3.71	2.95	1.89	1.29
	Girls	518	41.22	20.46	230	39.7	18.34	1712	45.01	21.01	3.79	3.67	5.31	4.05	-1.52	-1.01
	Diff.		-0.39			3.02			1.42							
	Total	1026	41.02	20.39	491	41.31	18.57	3464	45.73	20.97	4.71	6.46	4.42	4.85	0.29	0.28
	CR Value		0.31			1.81			1.99							
Langu- age	Boys	508	58.96	20.83	261	53.97	20.53	1752	64.62	19.65	5.66	5.46	10.65	7.86	-4.99	-3.18
	Girls	518	59.07	19.91	230	54.86	20.95	1712	63.64	19.44	4.57	4.6	8.78	6.02	-4.21	-2.57
	Diff.		-0.11			-0.89			0.98							
	Total	1026	59.02	20.36	491	54.38	20.71	3464	64.14	19.55	5.12	7.14	9.76	9.84	-4.64	-4.11
	CR Value		0.09			-0.48			1.48							

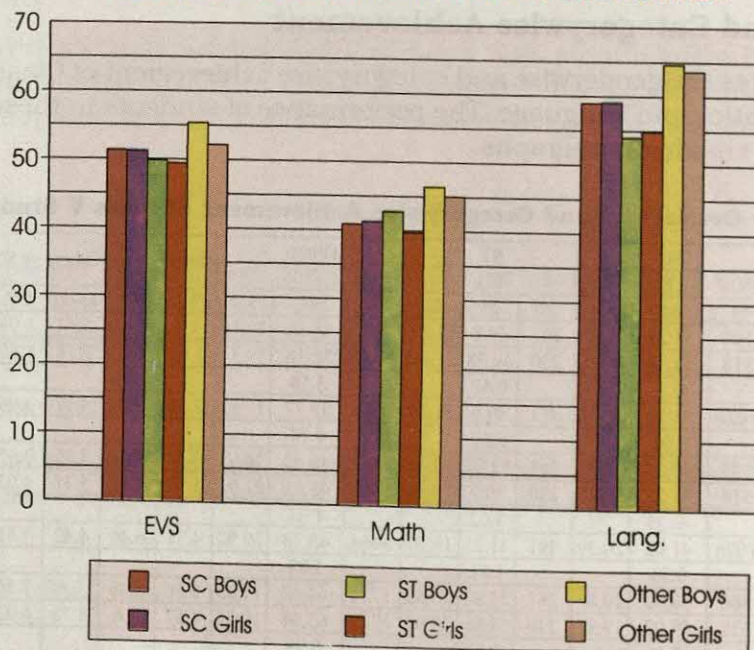
Environmental Studies

The data reveals that achievement of Others category was better than SC students followed by ST students and the differences in achievement were significant in case of Others vs SC and Others vs ST. In case of boys, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. In Others category, boys performed significantly better than girls.

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Mathematics

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC as well as ST. There was no Data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST students and differences in achievement were significant across the categories. There was no significant difference in achievement between boys and girls within the categories.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	508	64.17	21.56	261	58.8	22.8	1752	69.23	20.14	5.06	4.73	10.43	7	-5.37	-3.15
	Girls	518	63.61	20.71	230	58.8	21.85	1712	67.5	19.64	3.89	3.79	8.7	5.74	-4.81	-2.82
	Diff.		0.56			0			1.73							
	Total	1026	63.89	21.13	491	58.8	22.33	3464	68.37	19.91	4.48	6.04	9.57	9	-5.09	-4.23
	CR Value		0.42			0.00			2.84							
Reading Comprehension	Boys	508	50.29	23.77	261	45.9	22.32	1752	56.96	23.55	6.67	5.58	11.06	7.41	-4.39	-2.53
	Girls	518	51.49	22.91	230	48.29	24.54	1712	57.2	23.75	5.71	4.93	8.91	5.19	-3.2	-1.68
	Diff.		-1.2			-2.39			-0.24							
	Total	1026	50.9	23.34	491	47.02	23.39	3464	57.08	23.64	6.18	7.43	10.06	8.91	-3.88	-3.02
	CR Value		-0.26			1.12			-0.30							

The data reveals the achievement of students, both boys and girls of Others category was better than SC followed by ST and the differences in achievement were significant across the categories. In Others category, boys performed significantly better than girls.

Reading Comprehension

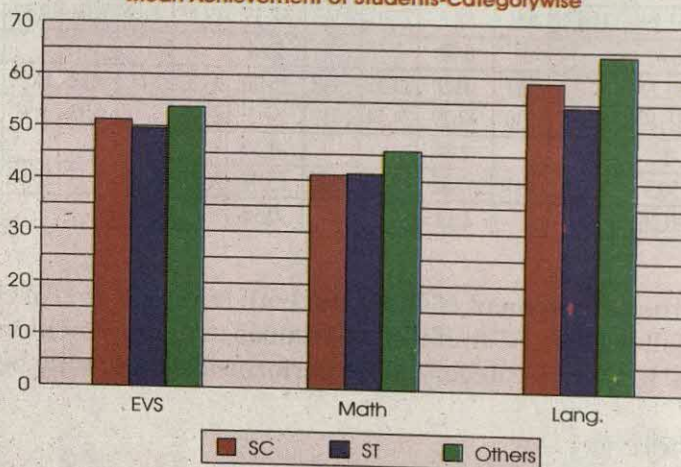
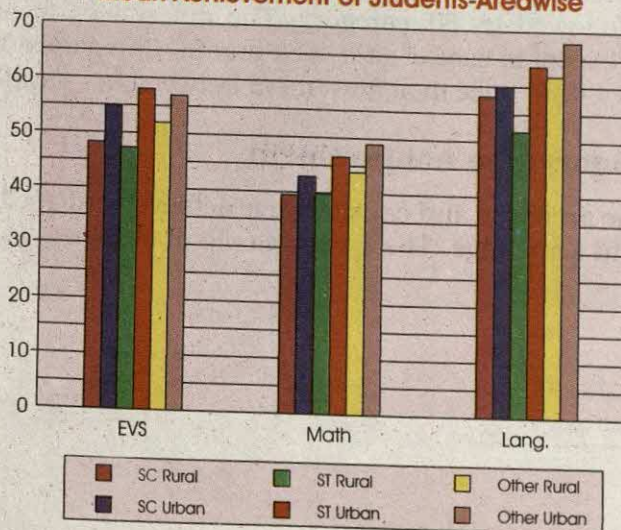
The data reveals that achievement of students, both boys and girls of Others category was better than SC followed by ST category. The differences in achievement were significant in all cases except in case of girls of ST and SC Categories. Within categories, there was no significant difference in achievement between boys and girls.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	574	48.22	20.71	386	47.32	20.74	2188	51.93	19.55	3.71	3.86	4.61	4.06	-0.9	-0.66
	Urban	452	54.96	20.73	105	58	21.73	1276	56.92	19.91	1.96	1.75	-1.08	-0.49	3.04	1.3
	Diff.		-6.74			-10.68			-4.99							
	Total	1026	51.19	20.98	491	49.6	21.39	3464	53.77	19.82	2.58	3.5	4.17	4.08	-1.59	-1.36
	CR Value		-5.17			-4.51			-7.16							
Mathematics	Rural	574	39.53	19.08	386	39.88	18.21	2188	43.85	19.38	4.32	4.81	3.97	3.91	0.35	0.29
	Urban	452	42.91	21.81	105	46.57	19	1276	48.95	23.1	6.04	4.98	2.38	1.21	3.66	1.73
	Diff.		-3.38			-6.69			-5.1							
	Total	1026	41.02	20.39	491	41.31	18.57	3464	45.73	20.97	4.71	6.46	4.42	4.85	0.29	0.28
	CR Value		-2.60			-3.23			-6.64							
Language	Rural	574	58.22	19.59	386	51.86	20.34	2188	61.89	18.83	3.67	4.03	10.03	9.03	-6.36	-4.82
	Urban	452	60.03	21.28	105	63.67	19.47	1276	68	20.16	7.97	6.94	4.33	2.18	3.64	1.69
	Diff.		-1.81			-11.81			-6.11							
	Total	1026	59.02	20.36	491	54.38	20.71	3464	64.14	19.55	5.12	7.14	9.76	9.84	-4.64	-4.11
	CR Value		-1.40			-5.46			-8.81							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Areawise**

Environmental Studies

The data reveals that in rural areas, achievement of Others was better than SC followed by ST and differences in achievement were significant between Others vs SC and Others vs ST. In urban areas, there was no significant differences across the categories. Within categories, differences in achievement were significant and favoured urban students in each case.

Mathematics

The data reveals that in rural areas, achievement of Others was better than ST followed by SC and differences in achievement were significant between Others vs SC and Others vs ST. In urban areas, achievement of Others was significantly better than SC. Within categories, differences in achievement were significant and favoured urban students in each case.

Language

The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and differences in achievement across the categories were significant. In urban areas, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. Within categories, achievement of urban students was better than rural students and differences in achievement were significant in ST and Others categories.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	574	63.12	20.72	386	56.09	22.11	2188	66.42	19.57	3.3	3.43	10.33	8.6	-7.03	-4.95
	Urban	452	64.86	21.62	105	68.76	20.34	1276	71.71	20.06	6.85	5.9	2.95	1.43	3.9	1.75
	Diff.		-1.74			-12.67			-5.29							
	Total	1026	63.89	21.13	491	58.8	22.33	3464	68.37	19.91	4.48	6.04	9.57	9	-5.09	-4.23
	CR Value		0.42			0.00			2.84							
Reading Comprehension	Rural	574	50.05	21.98	386	44.8	23.07	2188	54.33	22.75	4.28	4.12	9.53	7.5	-5.25	-3.52
	Urban	452	51.98	24.94	105	55.18	22.84	1276	61.8	24.4	9.82	7.23	6.62	2.84	3.2	1.27
	Diff.		-1.93			-10.38			-7.47							
	Total	1026	50.9	23.34	491	47.02	23.39	3464	57.08	23.64	6.18	7.43	10.06	8.91	-3.88	-3.02
	CR Value		-1.30			-4.12			-8.91							

The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and the differences in achievement were significant across the categories. In urban areas, Others performed significantly better than SC students. Within categories, performance of urban students was better than rural students and the differences in achievement were significant in ST and Others categories.

Reading Comprehension

The data reveals that in rural areas, achievement of Others category was better than SC followed by ST and differences in achievement across the categories were significant. In

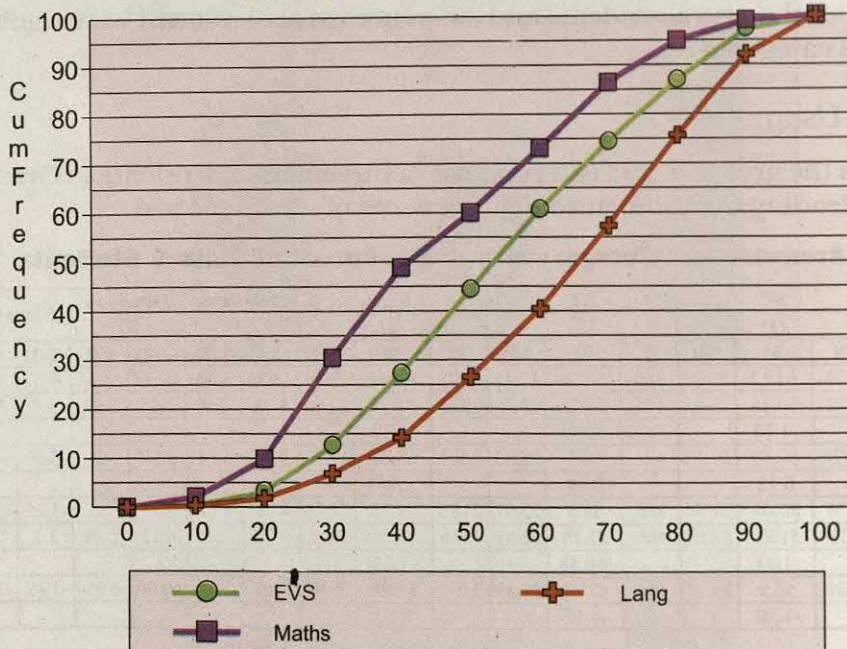
urban areas, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. Within categories, achievement of urban students was better than rural students and differences in achievement were significant in ST and Others categories.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	37	135	463	731	850	812	685	624	517	127
	cf	37	172	635	1366	2216	3028	3713	4337	4854	4981
	cf(%)	0.74	3.45	12.75	27.42	44.49	60.79	74.54	87.07	97.45	100
Math	f	106	388	1026	914	555	654	664	425	200	49
	cf	106	494	1520	2434	2989	3643	4307	4732	4932	4981
	cf(%)	2.13	9.92	30.52	48.87	60.01	73.14	86.47	95.00	99.02	100
Language	f	18	74	250	363	618	692	839	915	863	349
	cf	18	92	342	705	1323	2015	2854	3769	4632	4981
	cf(%)	0.36	1.85	6.87	14.15	26.56	40.45	57.30	75.67	92.99	100

Frequency Distribution of Students



The figures posted in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 per cent. The least number of cases in EVS (37), in Mathematics (49) and in Language (18) were in the range of 0-10 per cent, 90-100 per cent and 0-10 per cent, respectively. The maximum number of cases in EVS (850), in Mathematics (1026) and in Language (915) were in the range 40-50 per cent, 20-30 per cent and 70-80 per cent, respectively. 55.51 per cent students in EVS, 39.99 per cent in Mathematics and 73.44 per cent in Language scored more than 50% marks whereas 39.21% in EVS, 26.86% in Mathematics and 59.55% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	5
25 to less than 50	Difficult	17	12	21
50 to less than 75	Average	22	17	12
75 to 100	Very Easy	1	11	0

No items from EVS and Language were found very difficult. But, most of the items i.e., 43% in EVS, 30% in Language and 55% items in Mathematics were found difficult. Besides, Language (28% items) rest of the items belonged to average category.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	1	1	3
.30 to less than .70	Average Discrimination	37	38	30
Less than .30	Poor Discrimination	2	1	5

The items scrutinised were found adequately discriminated.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Spilt half	K.R. -20
1	EVS	40	0.82	0.88
2	Mathematics	38	0.79	0.88
3	Language	40	0.80	0.89

A high position co-efficient of reliability indicated consistency of the test.

IMPACT OF INTERVENING VARIABLES

School

Teaching, physical facilities, teaching time and number of Influences the learning achievement of children in Language, Mathematics and EVS. More working days teaching time and availability of physical facilities helps the children in improving the learning achievement in all the three subjects. Higher PTR had negative effect on achievement in all subjects.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	24.822	--	41.140	--	44.098	--
PTR	-0.132	-0.146*	-0.139	-0.121	-0.042	-0.071
Com_Participation	0.081	0.009	0.078	0.049	0.438	0.008
Teach-aid	0.888	0.112	0.418	0.123	1.416	0.197**
Physical facility	1.337	0.169*	2.050*	0.143*	1.077	0.162*
Ancillary facility	0.022	0.031	0.089	0.076	0.074	0.098
Instructional time	0.072*	0.128	0.093**	0.116	0.070*	0.128
Working day	0.099	0.021**	0.162*	0.013	0.021	0.012
Index-Comp. TLM	0.035	0.052	0.684	0.061	-0.092	-0.012
R²	0.078		0.122		0.105	

*Significant at level 0.05 **Significant at level 0.01

The predictors explain 7.8% of total variance in EVS, 12.2% in Mathematics and 10.5% in Language independently.

Teacher

School organisation and teaching aids and teaching influenced the learning achievement of children in EVS and Mathematics. The positive association of these two variables with the two criterions indicates that support from senior teachers and use of teaching aids and teaching style of teachers in the class help the children in improving their skills in Environmental Sciences and Mathematics. Teachers' qualification, teaching experience and training did not help the children in improving their learning skills in all the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	40.648	--	38.154	--	58.286	--
Index-Qualification	0.051	0.043	0.041	0.007	1.251	0.062
Index-Experience	0.108	0.021	0.069	0.047	0.849	0.031
Index-Teaching Aid	3.662**	0.158**	4.078**	0.142**	0.929	0.056
Index-School Org.	1.058**	0.210**	0.519	0.114**	0.400	0.084
R²	0.063		0.031		0.013	

*Significant at level 0.05 **Significant at level 0.01

The set of predictors explain 6.3% of total variance in EVS, 3.1% in Mathematics and 1.3% in Language independently.

Pupil

By and large teaching-learning processes adopted by teachers in the class, percentage attendance of students in the school, age of children, schooling practices and academic assistance provided by the family members and educational status and occupation of parents influence the learning achievement of children in EVS, Mathematics and Language. The teaching-learning processes adopted by teachers, schooling practices, parent's education and occupation and percentage attendance of children in school are positively associated with these criteria, indicating that these help the children in improving their learning skills in the three subjects. Children with in higher age group perform poorly.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

*Significant at level 0.05 **Significant at level 0.01

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	16.460	--	15.480	--	36.855	--
Index-Ed & Occu	1.485**	0.091**	1.816**	0.103**	5.092**	0.232**
Index-Schooling	3.318**	0.159**	3.117**	0.152**	3.619**	0.221**
Index-TLP	5.648**	0.148**	5.075**	0.136**	5.846**	0.173**
Age	-0.371**	-0.098	-0.188**	-0.052**	-0.036**	-0.001
Detention	-0.068**	-0.014	-0.982**	-0.111**	-0.611**	-0.110**
Attendance	0.034*	0.020*	0.058*	0.049**	0.111**	0.084**
R²	0.078		0.056		0.107	

The set of predictors explain 7.8% of total variance in EVS, 5.6% in Mathematics and 10.7% in Language independently.

One can infer from the above analysis that percentage of female teachers in the school, help of senior colleagues from school organisation, teaching aids and teaching style of teachers help in improving the learning achievement of children in the three subjects. Further, teaching-learning process adopted by teachers in the class, schooling practices and attending school regularly by the students help the children in improving their learning achievement in the three subjects.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Maharashtra out of 4 districts, Beed is the only DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	635	62.09	21.68	1886	51.19	19.5	-11.23
	Girls	544	57.01	21.94	1916	50.17	18.96	-6.6
	Diff.		5.08			1.02		
	Total	1179	59.75	21.94	3802	50.68	19.23	-12.76
	CR Value		3.99			1.63		
Mathematics	Boys	635	49.33	20.5	1886	43.43	20.56	-6.27
	Girls	544	47.22	21.7	1916	42.72	20.37	-4.33
	Diff.		2.11			0.71		
	Total	1179	48.36	21.08	3802	43.07	20.46	-7.58
	CR Value		1.71			1.07		
Language	Boys	635	63.2	21.12	1886	62.1	20.02	-1.15
	Girls	544	63.07	20.11	1916	61.51	19.82	-1.6
	Diff.		0.13			0.59		
	Total	1179	63.14	20.65	3802	61.8	19.92	-1.96
	CR Value		0.11			0.91		

The data reveals that in all the three subjects, the achievement of students of DPEP districts was significantly better than students of non-DPEP districts.

HARD SPOT OF LEARNING

In EVS no item is found very difficult. However, 17 (42%) items were found difficult. The hard spots were identification of natural features of the country, boundaries with neighbouring countries, understanding a longitude and a latitude, representative of a President in a state, judicial functions of courts, recognition of first President of India, system of Governance in India, knowledge UN days, knowledge of pre-British rule, knowledge of solar system, planets etc, understanding of eclipse, knowledge of composition of air, effects of weather conditions on human bodies, effects of force, conservation of wild animals and knowledge of carrier of diseases.

Likewise, no item is found very difficult in Language. However, 12(30%) items were found difficult. The hard spots in Language are comprehension of instructions, comprehension of time, comprehension of informatical passage and comprehension of story.

In Mathematics, items 23, 25, 26, 29 and 35 are found very difficult and 21(53%) items were found difficult. The hard spots in Mathematics are ascending/ descending order, HCF, LCM, division, unitary method, profit and loss, simple interest, word problem on addition, time, conversion to lowest term, division, word problem on subtraction, word problem on multiplication, conversion from percent to fraction, percent, word problem on percent, subtraction of fraction, rounding of numbers, triangle according to sides and area of square.

FINDINGS

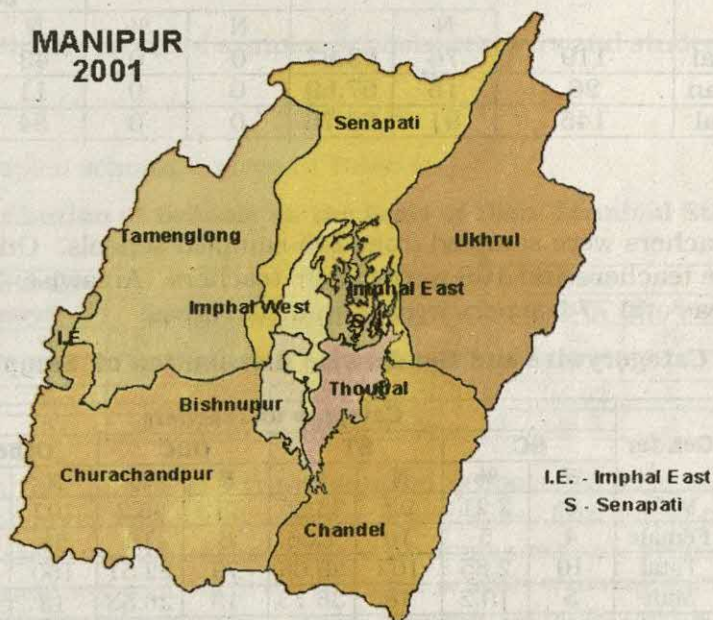
Analysis of the results signified that

- Black Board was available in 99% schools.
- Chalk and Duster were available in all schools.
- TV and computer were available in 30% to 42% schools.
- More textbooks, workbooks and teachers' Handbooks, teaching Aids were available for primary classes in 2001 as compared to year 1998.
- Average number of working days in schools was approximately 222.
- In rural areas more than 2/3rd schools were having Village Education Committees.
- AEC, SMC and PTA were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was lower in rural schools than urban schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Very few teachers were having educational qualification below Class X level
- More degree holder male teachers studied Mathematics, Language and Social Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- Minimum in-service training programmes were conducted by School Complex, DIET and maximum by SCERT.
- Maximum in-service training programmes were conducted on 'Competency-based Teaching-learning and minimum on 'Use of Instructional Material' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by approximately 2/3rd teachers.
- Approximately 1/3rd teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Majority of fathers were skilled worker and mothers were housewives in urban areas.
- In most of cases teachers were getting assistance from 'always Head of Schools' 'always'.
- For approximately 90% students, medium of instructions in the school was same as the language spoken at home.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general educational qualification of mothers was poorer than fathers.
- Boys were getting more academic assistance from fathers/guardian than other family members.
- Girls were getting more academic assistance from elder brothers/sisters.
- Approximately, 87% students were attending schools above 70% working days.
- Approximately, less than 2% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of urban students was better than their counterparts in rural areas.
- In EVS, Language and Mathematics, there was significant difference in students' achievement between Others vs SC and Others vs ST.
- In rural areas, performance of Other students was better than SC and ST students in all subjects.
- In urban areas, performance of students of Others category was better than SC students.
- The number of male teachers having qualification below Class X was higher than female teachers in all subjects at primary level.
- Teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools.
- Percentage of girls attending 90-100% of school days were higher than boys.

- More female teaches in the school, help from school organisation, teaching aids and teaching style of teachers help in improving the learning achievement of children in the three subjects.
- Teaching-learning process adopted by teachers in the class, schooling practices and attending school regularly help the children in improving their learning achievement in the three subjects.
- Both boys and girls from DPEP districts have performed significantly better than their non DPEP districts counterparts in all three subjects.

INTRODUCTION

Manipur with an area of 22,356 sq. km. has a population of 18,37,149 according to 1991 census report. After independence, Manipur showed a rapid expansion in education quantitatively and qualitatively. The number of primary schools in 1951 was 558 only, while in 2001 it rose to 2,593. All the high schools are affiliated with the Board of Secondary Education, Manipur and the higher secondary schools with the Council of Higher Secondary Education, Manipur. While the curricular, syllabi and textbooks for Classes I to VIII are looked after by the SCERT, the Board of Secondary Education deals with Classes IX and X, and the Council of Higher Secondary Education has Classes XI and XII under its fold. At present the SCERT and the Board are working to review the curriculum for Classes I to X in the light of the National Curriculum Framework, 2002. There are 9 districts in the state.



The public examination at the end of Class X, called High School Leaving Certificate Examination is conducted by the Board of Secondary Education and the Higher

Secondary Examination at the end of Class XII is conducted by the Council of Higher Secondary Examination. The question papers, set by persons trained in the technique of setting question papers, set the question paper according to the prescribed designs of question papers. The answer scripts are centrally evaluated. The continuous and comprehensive evaluation is introduced in secondary stage in scholastic areas only. Work is going on for introducing the same in co-scholastic areas as well. The SCERT and the Board are working for introduction of the grading system along with the revised curricular.

Thus, education in Manipur, particularly school education, is active and ever ready to follow the national trend.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 145 schools were sampled from Churachandpur, Imphal East and Thoubal districts of Manipur. Out of total sampled schools, 49 schools were from Churachandpur, 48 from Imphal East and 48 from Thoubal.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	119	76	63.87	0	0	43	36.13
Urban	26	15	57.69	0	0	11	42.31
Total	145	91	62.76	0	0	54	37.24

Teachers

A total 428 teachers were sampled from 145 sampled schools. Out of 428 teachers, 320 were male teachers and 108 were female teachers. Areawise, 351 teachers were from rural areas and 77 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	6	2.21	92	33.95	71	26.2	102	37.64	271
	Female	4	5	10	12.5	8	10	58	72.5	80
	Total	10	2.85	102	29.06	79	22.51	160	45.58	351
Urban	Male	5	10.2	18	36.73	13	26.53	13	26.53	49
	Female	2	7.14	7	25	15	53.57	4	14.29	28
	Total	7	9.09	25	32.47	28	36.36	17	22.08	77
Total	Male	11	3.44	110	34.38	84	26.25	115	35.94	320
	Female	6	5.56	17	15.74	23	21.3	62	57.41	108
	Total	17	3.97	127	29.67	107	25	177	41.36	428

Table 2 shows that the percentage of male teachers was higher than female teachers that of in case of Scheduled Tribes and OBC categories, but the trend was reverse in case of Scheduled Caste and other categories.

Students

A total number of 2,140 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the distribution of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Chura-chandpur	Rural	193	130	323
	Urban	102	98	200
	Total	295	228	523
Imphal East	Rural	331	416	747
	Urban	65	61	126
	Total	396	477	873
Thoubal	Rural	340	299	639
	Urban	52	53	105
	Total	392	352	744
Total	Rural	864	845	1709
	Urban	219	212	431
	Total	1083	1057	2140

Out of 2,140 students, 1,709 students were from rural areas and remaining 431 students were from urban areas. Out of the total sample, 1,083 were boys and 1,057 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	0	0	32	26.89	56	47.06	30	25.21	1	0.84
Urban	0	0	6	23.08	10	38.46	9	34.62	1	3.85
Total	0	0	38	26.21	66	45.52	39	26.9	2	1.38

Table 4 indicates that out of 119 rural sampled schools, 26.89% schools were primary, 47.06% elementary and 25.21% secondary schools. Further, approximately 27% schools in rural areas and 23% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 47% and 38% respectively for rural and urban areas. However, schools having secondary classes were 25% and 35% respectively from rural and urban areas. Further, only one school each from rural and urban having Sr. Secondary classes was sampled.

Facilities related to teaching-learning process

It was observed that maps and charts were available in more than 80% schools. Charts and game equipments were available in 74% and 70% schools respectively. Magazines, journals and newspapers and maths kits were available in 52-53% schools. Play material and toys, primary science kits, reference books, dictionaries, encyclopedia and children books were available in 61% to 66% schools. Besides, mini tool kit was available in only 39% schools.

Infrastructural facilities

It was observed that school bell, chairs for teachers, blackboard, tables for teachers and chalk and duster were available in 92% and more schools, whereas water pitcher, ladel and glasses, and dustbin were available in 66% to 67% schools. Besides, play ground was available in 73% schools. However, musical instruments were available in only 51% schools. Further, pin-up board/notice board was available in 60% schools.

Ancillary Facilities

Computer and TV were available only 4 to 9% schools. Electric connection, annual medical check-up for children, and immunisation facilities were available in 31% to 38% schools. Further, toilet facility was available in 68% schools. Safe drinking water facility was available in 71% schools. However, separate toilet facilities for girls and first-aid kits were available in 48% schools.

Competency based Teaching Materials

Information gathered shows that, out of 145 schools, competency based textbooks were available in more schools than workbooks, teaches' handbook and teaching aids. Teachers' handbook were available in lesser number of schools as compared with remaining. However, workbooks and teaching aids were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the category wise and gender wise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving Facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	575	677	974	1075	1765	1871	2030	2462	5344	6085
	%	10.76	11.18	18.23	17.75	33.63	30.90	37.99	40.33	100	100
Free uniform	N	0	0	50	50	229	313	222	222	501	585
	%	0	0	9.98	8.55	45.71	53.50	44.31	37.95	100	100
Free textbooks	N	0	161	65	66	139	1209	222	1089	426	2525
	%	0	6.38	15.26	2.61	32.63	47.88	52.11	43.13	100	100
Scholarship for regular attendance	N	4	3	0	0	8	9	247	259	259	271
	%	1.54	1.11	0	0	3.09	3.32	95.37	95.57	100	100
Other Schemes	N	0	0	10	11	0	0	240	247	250	258
	%	0	0	4.00	4.26	0	0	96.00	95.74	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, free uniform and free textbooks were available to both and girls of OBC and Other categories. But, scholarship for regular attendance and other schemes were mostly available to both boys and girls of only Other categories.

Instructional Time

Average number of working days in schools was approximately 209 days on an average. Schools were having 6 periods in a day of 43 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 145 sampled schools, 48(33%) schools were having Village Education Committees (VEC). Area Education Committee was observed in 23(15.86%) schools, School Management Committee was observed in 141 (97.24%) schools and Parent Teacher Association was observed in 46(31.72%) schools. Further, VEC, AEC, SMC and PTA were found in more schools in rural areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	43	5	48
	%	36.13	19.23	33.1
AEC	N	19	4	23
	%	15.97	15.38	15.86
SMC	N	116	25	141
	%	97.48	96.15	97.24
PTA	N	38	8	46
	%	31.93	30.77	31.72

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7 : Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	119	567	59.68	383	40.32	950	8	28
Urban	26	128	44.14	162	55.86	290	11	26
Total	145	695	56.05	545	43.95	1240	9	28

Table 7 shows that overall number of male teachers was more than that of female teachers. However, the number of female teachers in schools in urban areas was more than that of male teachers. The average number of teachers per school in rural and urban areas was 8 and 11, respectively. Further, average teacher-pupil ratio was 28:1, however, this ratio was 26:1 approximately in schools located in urban areas.

Educational Qualification

The percentage of female teachers having Post Graduate degree was more than male teachers. This trend was same for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary and sr. secondary levels

was lower than their counterparts. Besides, only approximately 1% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	3	0.94	42	13.13	71	22.19	193	60.31	11	3.44	320
Female	3	2.78	8	7.41	14	12.96	68	62.96	15	13.89	108
Total	6	1.4	50	11.68	85	19.86	261	60.98	26	6.07	428

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to the level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	30	9.38	173	54.06	76	23.75	41	12.81	320
	Female	17	15.74	53	49.07	19	17.59	19	17.59	108
	Total	47	10.98	226	52.8	95	22.2	60	14.02	428
Science	Male	31	9.69	180	56.25	62	19.38	47	14.69	320
	Female	17	15.74	49	45.37	9	8.33	33	30.56	108
	Total	48	11.21	229	53.5	71	16.59	80	18.69	428
Language (Medium)	Male	23	7.19	94	29.38	109	34.06	94	29.38	320
	Female	11	10.19	24	22.22	25	23.15	48	44.44	108
	Total	34	7.94	118	27.57	134	31.31	142	33.18	428
Social Science	Male	50	15.63	174	54.38	44	13.75	52	16.25	320
	Female	17	15.74	64	59.26	16	14.81	11	10.19	108
	Total	67	15.65	238	55.61	60	14.02	63	14.72	428

The data reveals that in Mathematics, Science and Language, the percentage of female teachers who studied these subject upto degree level was more than male teachers. However, this trend was reverse in case of Science. The percentage of male teachers who studied Mathematics, Science and Language upto higher secondary level was more than female teachers. The same trend was at secondary level. Besides, the percentage of female teachers who studied Mathematics, Science, Language and Social Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
145	Male	137	32	2
	Female	29	19	3
	Total	166	51	5

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few male teachers were having M.Ed. degree, but some teaches were having B.Ed. degree. Besides, male teachers had slightly better professional qualification than female teachers.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. All the teaching aids were available to more than 85% teachers in urban schools except others and to more than 88% teachers in rural schools except Science kit, Mathematics kit and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Oranisers who provided training		No. of Teachers Trained
1. School Complex	N	4
	%	0.93
2. Block Resource Centre	N	2
	%	0.47
3. Teacher Resource Centre	N	5
	%	1.17
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	16
	%	3.74
6. SCERT	N	3
	%	0.70
7. Others	N	5
	%	1.17

Out of total 428 teachers, 390(91.12%) were without any in-service training during the last three years. The percentage of male and female teachers who have not attended any in-service programme was nearly same. However, the percentage of teachers who did not attend any training programme was more in rural areas than urban areas. Percentage of female teachers in rural schools and male teachers in urban schools was more than their counterparts in the respective areas who have not attended any training programme.

The in-service training programme were organised in the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Few teachers attended the programme conducted by the DIET.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	9
2. Content Enrichment	1
3. Production of Instructional Material	0
4. Use of Instructional Material	2
5. Assessment of Pupil Learning	10
6. Competency based Teaching Learning	13
7. Activity based Joyful Learning	1
8. Others	2

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Competency Based Teaching-Learning' and it was followed by 'Assessment of Pupils learning'. Further only one programme was conducted on 'Content Enrichment and Activity based Teaching-Learning'. But not a single programme was conducted on 'Production of Instructional Material'.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	11	3	8	10
	%	28.95	7.89	21.05	26.32
Average	N	22	24	25	20
	%	57.90	63.16	65.78	52.63
Low	N	5	11	5	8
	%	13.15	28.95	13.15	21.05

It is evident that approximately 58% training programmes were 'average' effective in terms of utility of knowledge gained during training programmes. Only 29% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 53% to 66% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 8% to 26% teachers.

Academic Assistance received from various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School' from Block Resource Centre they were getting assistance maximum 'sometimes'.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 59% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	102	4.76	214	10.00
1. Illiterate	345	16.12	677	31.64
2. Literate	492	23.00	596	27.85
3. Primary	236	11.03	184	8.60
4. Secondary	539	25.19	279	13.04
5. Sr. Secondary	188	8.78	94	4.39
6. Degree and above	213	9.95	52	2.43
7. Do not Know/ Cannot say	25	1.67	44	2.06

Table 14 indicates that approximately 16% father and 32% mother of the students were illiterate. Only 10% father and 2% mother were having degree or higher educational qualifications. Further, of the remaining parents 36% and 22% father and mother were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	58	29	87	26	14	40
Household/ Housewife	30	3	33	1071	277	1348
Farmer	682	70	752	192	7	199
Poultry farming	9	1	10	8	2	10
Agricultural labour	200	19	219	80	2	82
Picking forest produce	2	0	2	1	0	1
Domestic Servant	18	6	24	117	24	141
Street Vender	10	2	12	20	2	22
Manual unskilled worker	27	3	30	26	4	30
Skilled worker	162	60	222	43	23	66
Clerical worker	47	12	59	4	17	21
Shopkeeper	62	31	93	41	21	62
Employer	303	131	434	57	23	80
Manager/Senior Officer	19	34	53	7	5	12
Others	80	30	110	16	10	26

In rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives but fathers were employer. Number of Manager/Senior Officers father was more than mothers. In decreasing order, fathers were working as farmer, employer, skilled worker, agricultural labour, others, shopkeeper, clerical worker and manager/senior officer, etc. In decreasing order mothers were working as household/housewives, farmer, domestic servant, agricultural labour, employer, skilled worker, shopkeeper, etc.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	628	657	163	145	791	802
	%	72.69	77.75	74.43	68.4	73.04	75.88
Mother	N	552	537	133	141	685	678
	%	63.89	63.55	60.73	66.51	63.25	64.14
Elder Brother/Sister	N	505	465	133	128	638	593
	%	58.45	55.03	60.73	60.38	58.91	56.1
Others	N	200	177	56	37	256	214
	%	23.15	20.95	25.57	17.45	23.64	20.25

Girls and boys both in rural and urban areas as well as overall were getting more help from father/guardian than any other. However, in urban areas girls were getting more academic assistance from father, than boys but the trend was almost same in rural areas. The descending order of academic assistance provided by the family members was father, mother, elder brother and sisters and others.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. However, the percentage of boys attending school between 80-90% of working days was more than girls. Only 2-3% boys and girls were attending schools less than 60% of total working days. Approximately 88% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Manipur. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

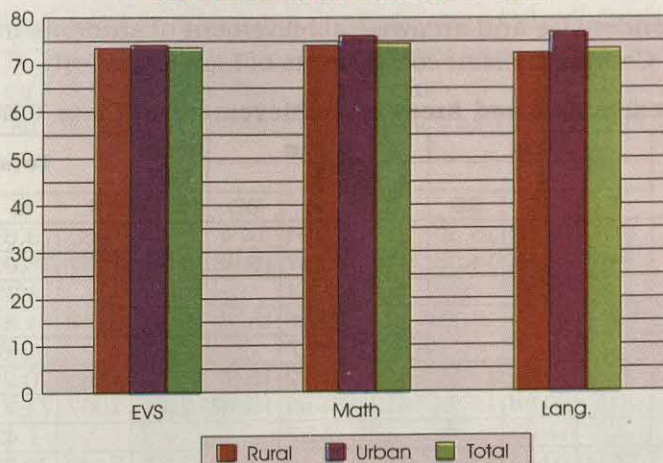
Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

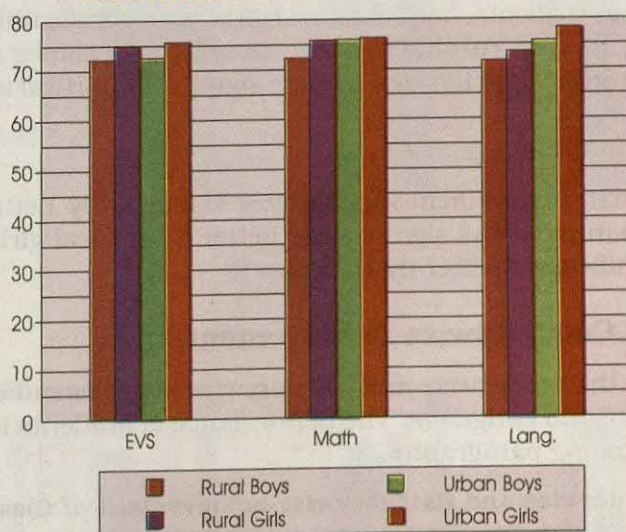
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	864	72.16	16.44	219	72.57	15.67	0.41	1083	72.24	16.28	0.34
	Girls	845	74.82	15.26	212	75.66	16.69	0.84	1057	74.99	15.55	0.67
	Diff.		-2.66			-3.09				-2.75		
	Total	1709	73.48	15.92	431	74.09	16.23	0.61	2140	73.6	15.98	0.7
	CR Value		-3.47			-1.98				-4		
Mathe- matics	Boys	864	72.29	19.99	219	75.97	18.95	3.68	1083	73.04	19.83	2.54
	Girls	845	75.83	19.07	212	76.3	21.09	0.47	1057	75.93	19.48	0.3
	Diff.		-3.54			-0.33				-2.89		
	Total	1709	74.04	19.62	431	76.13	20	2.09	2140	74.46	19.71	1.95
	CR Value		-3.75			-0.17				-3.4		
Langu- age	Boys	864	71.59	14.01	219	75.61	12.11	4.02	1083	72.4	13.73	4.24
	Girls	845	73.43	13.02	212	78.3	14.1	4.87	1057	74.4	13.38	4.56
	Diff.		-1.84			-2.69				-2		
	Total	1709	72.5	13.56	431	76.93	13.18	4.43	2140	73.39	13.6	6.2
	CR Value		-2.81			-2.12				-3.41		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Environmental Studies

The data given in Table 17 reveals that achievement of girls was significantly better than boys. In both rural and urban areas also girls performed better than boys. There was no significant difference in achievement of rural and urban students.

Mathematics

The data reveals that achievement of girls was significantly better than boys. The boys of urban areas performed significantly better than rural boys. In rural areas, girls performed significantly better than boys.

Language

The data reveals that achievement of girls was significantly better than boys. The performance of urban students, both boys and girls, was significantly better than their rural counterparts. In both rural and urban areas, girls performed significantly better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	864	72.59	15.39	219	77.94	14.4	5.35	1083	73.67	15.34	4.84
	Girls	845	74.91	14.03	212	80.47	16.98	5.56	1057	76.02	14.83	4.41
	Diff.		-2.32			-2.53				-2.35		
	Total	1709	73.73	14.77	431	79.18	15.76	5.45	2140	74.83	15.13	6.5
	CR Value		-3.26			-1.67				-3.6		
Compre- hension	Boys	864	69.93	17.37	219	71.72	12.96	1.79	1083	70.29	16.58	1.69
	Girls	845	70.96	16.94	212	74.69	13.77	3.73	1057	71.71	16.42	3.36
	Diff.		-1.03			-2.97				-1.42		
	Total	1709	70.44	17.16	431	73.18	13.43	2.74	2140	70.99	16.51	3.56
	CR Value		-1.24			-2.3				-1.99		

The data reveals that achievement of girls was significantly better than boys. The performance of urban students, both boys and girls, was significantly better than their rural counterparts. In both rural and urban areas, performance of girls was better than boys and differences in achievement were significant in rural areas.

Reading Comprehension

The data reveals that achievement of girls was significantly better than boys. The performance of urban girls was significantly better than rural girls. In urban areas, girls performed significantly better than boys.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

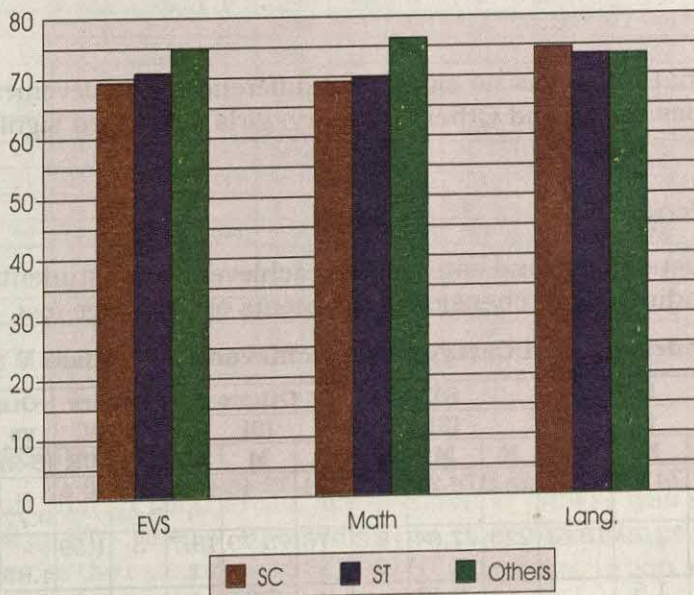
Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	28	69.82	10.36	281	68.51	15.18	774	73.69	16.63	3.87	1.89	5.18	4.77	-1.31	-0.61
	Girls	56	68.93	10.56	225	73.51	15.54	776	75.86	15.74	6.93	4.56	2.35	1.99	4.58	2.62
	Diff.		0.89			-5			-2.17							
	Total	84	69.23	10.44	506	70.73	15.53	1550	74.77	16.22	5.54	4.57	4.04	5.03	1.5	1.13
	CR Value		0.39			-3.63			-2.64							
Mathematics	Boys	28	66.35	21.23	281	68.67	19.86	774	74.86	19.49	8.51	2.09	6.19	4.5	2.32	0.55
	Girls	56	70.49	20.96	225	71.33	21.07	776	77.65	18.62	7.16	2.49	6.32	4.06	0.84	0.27
	Diff.		-4.14			-2.66			-2.79							
	Total	84	69.11	21.01	506	69.86	20.43	1550	76.26	19.1	7.15	3.05	6.4	6.22	0.75	0.3
	CR Value		-0.85			-1.45			-2.88							
Language	Boys	28	75.36	8.13	281	72.03	14.21	774	72.43	13.72	-2.93	-1.82	0.4	0.41	-3.33	-1.9
	Girls	56	74.11	11.9	225	75.01	16.91	776	74.25	12.3	0.14	0.08	-0.76	-0.63	0.9	0.46
	Diff.		1.25			-2.98			-1.82							
	Total	84	74.52	10.76	506	73.35	15.52	1550	73.34	13.05	-1.18	-0.97	-0.01	-0.01	-1.17	-0.86
	CR Value		0.57			-2.17			-2.75							

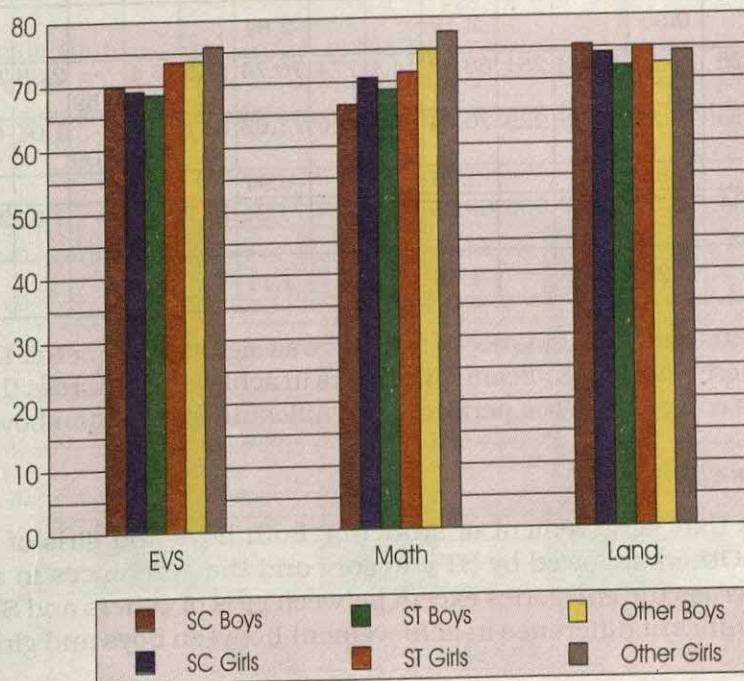
Environmental Studies

The data reveals that achievement of students of Others category was better than ST followed by SC and differences in achievement were significant between Others vs SC and Others vs ST. In case of boys, performance of Others was significantly better than ST. In case of girls, achievement of Others was better than ST followed by SC and

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



differences in achievement were significant across the categories. In ST and Others categories, girls performed significantly better than boys.

Mathematics

The data reveals that achievement of students, both boys and girls of Others category was better than ST followed by SC and differences in achievement were significant between Others vs SC and Others vs ST. In Others category, girls performed significantly better than boys.

Language

The data reveals that there was no significant difference in achievement of students across the categories. In ST and Others category, girls performed significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	28	74.29	10.75	281	74.22	16.4	774	73.45	15.0	-	-0.4	-	-	-	-
	Girls	56	72.79	13.61	225	77.64	18.3	776	75.79	13.7	9	0.84	0.77	0.69	0.07	0.03
	Diff.		1.5			-3.42			-2.34				1.85		4.85	2.21
	Total	84	73.29	12.68	506	75.74	17.3	155	74.62	14.4	1.33	0.93	-	-	2.45	1.55
	CR Value		0.55			-2.19			-2.84				1.12	1.31		
Reading Compre-hension	Boys	28	77.14	12.63	281	68.38	14.4	774	70.74	17.3	-6.4	-	2.36	2.22	-	-
	Girls	56	76.31	15.98	225	70.64	17.4	776	71.68	16.1	2	2.59	1.04	0.8	-	-
	Diff.		0.83			-2.26			-0.94			4.63	2.09		5.67	2.33
	Total	84	76.59	14.87	506	69.38	15.8	155	71.21	16.7	-	-	1.83	2.22	-	-
	CR Value		0.26			-1.56			-1.11		3	5.38	3.21		7.21	4.08

The data reveals that performance of ST girls was significantly better than SC girls. In other cases, there was no significant differences in achievement across the categories. In ST and Others categories, girls performed significantly better than boys.

Reading Comprehension

The data reveals that achievement of students, both boys and girls of SC category was better than Others followed by ST category and the differences in achievement was significant across the categories except between girls of Others and ST categories. There was no significant difference in achievement between boys and girls within the categories.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

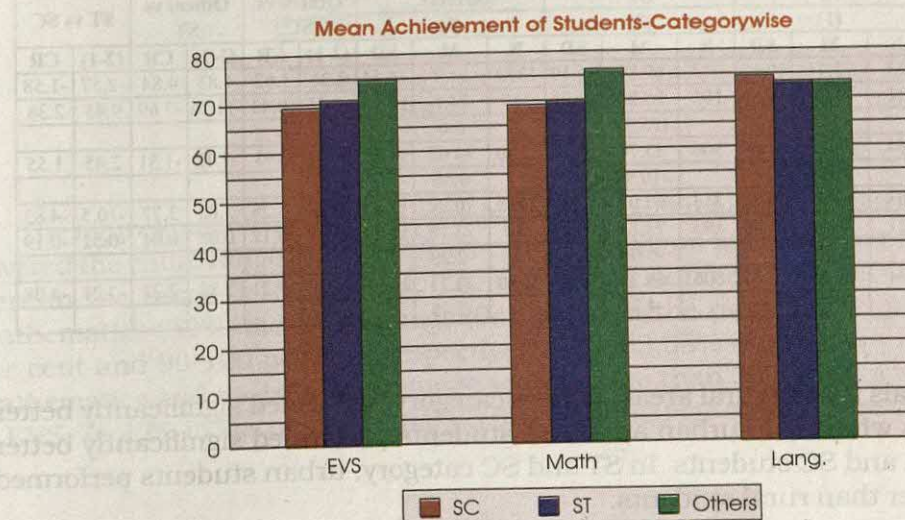
Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	63	67.78	9.71	313	68.68	12.85	1333	74.87	16.52	7.09	5.44	6.19	7.23	0.9	0.63
	Urban	21	73.57	11.55	193	74.05	18.65	217	74.17	14.25	0.6	0.22	0.12	0.07	0.48	0.17
	Diff.		-5.79			-5.37			0.7							
	Total	84	69.23	10.44	506	70.73	15.53	1550	74.77	16.22	5.54	4.57	4.04	5.03	1.5	1.13
	CR Value		-2.07			-3.52			0.66							
Mathematics	Rural	63	67.08	18.7	313	65.59	16.26	1333	76.36	19.77	9.28	3.84	10.77	10.1	-1.49	-0.59
	Urban	21	75.19	26.39	193	76.78	24.29	217	75.65	14.39	0.46	0.08	-1.13	-0.56	1.59	0.26
	Diff.		-8.11			-11.19			0.71							
	Total	84	69.11	21.01	506	69.86	20.43	1550	76.26	19.1	7.15	3.05	6.4	6.22	0.75	0.3
	CR Value		-1.30			-5.67			0.64							
Language	Rural	63	74.37	9.95	313	68.82	14.94	1333	73.27	13.22	-1.1	-0.84	4.45	4.84	-5.55	-3.67
	Urban	21	75	13.16	193	80.71	13.53	217	73.76	11.99	-1.24	-0.42	-6.95	-5.48	5.71	1.88
	Diff.		-0.63			-11.89			-0.49							
	Total	84	74.52	10.76	506	73.35	15.52	1550	73.34	13.05	-1.18	-0.97	-0.01	-0.01	-1.17	-0.86
	CR Value		-0.20			-9.22			-0.55							

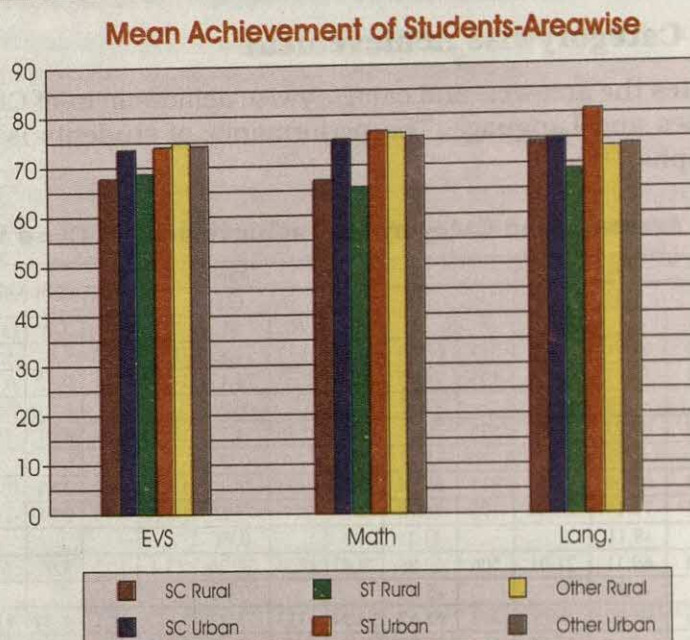
Environmental Studies

The data reveals that in rural areas, achievement of Others was significantly better than SC as well as ST students. In urban areas, there was no significant difference in achievement across the categories. In SC and ST categories, urban students performed significantly better than rural students.

Mathematics

The data reveals that in rural areas, achievement of Others was significantly better than SC as well as ST students. In urban areas, there was no significant difference in achievement across the categories. In ST category, urban students performed





significantly better than rural students.

Language

The data reveals that in rural areas, differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. In urban areas, ST students performed significantly better than Others. In ST category, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
Grammar & Usage	Rural	63	72.44	10.63	313	69.87	16.19	1333	74.7	14.44	2.26	1.62	4.83	4.84	-2.57	-1.58
	Urban	21	75.81	17.55	193	85.26	14.77	217	74.1	14.55	-1.71	-0.43	-11.16	-7.69	9.45	2.38
	Diff.		-3.37			-15.39			0.6							
	Total	84	73.29	12.68	506	75.74	17.35	1550	74.62	14.45	1.33	0.93	-1.12	-1.31	2.45	1.55
	CR Value		-0.83			-10.97			0.56							
Reading Comprehension	Rural	63	77.57	15.72	313	67.07	15.84	1333	70.89	17.38	-6.68	-3.28	3.82	3.77	-10.5	-4.83
	Urban	21	73.65	11.83	193	73.13	15.23	217	73.18	11.84	-0.47	-0.17	0.05	0.04	-0.52	-0.19
	Diff.		3.92			-6.06			-2.29							
	Total	84	76.59	14.87	506	69.38	15.87	1550	71.21	16.73	-5.38	-3.21	1.83	2.22	-7.21	-4.08
	CR Value		1.21			-4.28			-2.45							

The data reveals that in rural areas, Others category performed significantly better than ST students whereas in urban areas, ST students performed significantly better than both Others and SC students. In ST and SC category, urban students performed significantly better than rural students.

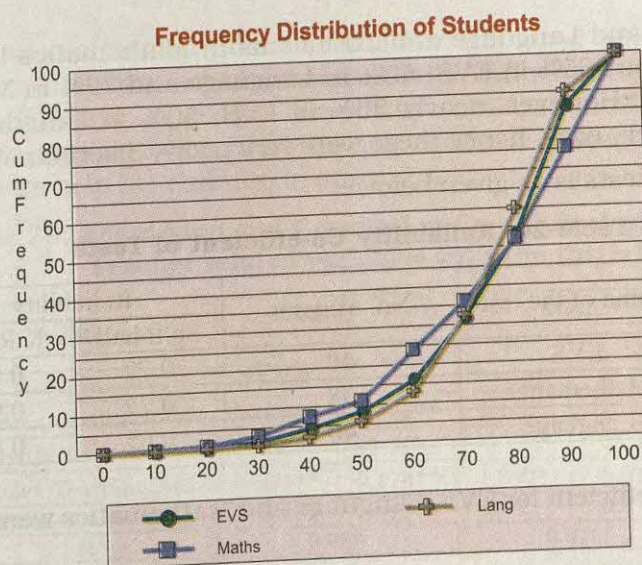
Reading Comprehension

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and differences in achievement were significant across the categories. In urban areas, there was no significant difference in achievement across the categories. In ST and Others categories, urban students performed significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	0	6	24	64	84	165	338	456	709	294
	cf	0	6	30	94	178	343	681	1137	1846	2140
	cf(%)	0	0.28	1.40	4.39	8.32	16.03	31.82	53.13	86.26	100
Math	f	5	14	45	97	79	271	264	343	499	523
	cf	5	19	64	161	240	511	775	1118	1617	2140
	cf(%)	0.23	0.89	2.99	7.52	11.21	23.88	36.21	52.24	75.56	100
Language	f	0	3	8	36	78	155	419	585	646	2140
	cf	0	3	11	47	125	280	699	1284	1930	2140
	cf(%)	0	0.14	0.51	2.20	5.84	13.08	32.66	60.00	90.19	100



The figures posted in Table 23 reveals that in Mathematics, the distribution of scores covered the entire range from 0-100 per cent. In EVS and Language none of the students were in the range 0-10 per cent. The maximum number of cases in EVS (709), in mathematics (523) and in language (646) were in the range 80-90 per cent, 90-100 per cent and 90-100 per cent respectively. The 93.68% students in EVS, 88.70% in Mathematics and 84.16% in language scored more than 50% marks whereas 83.97% in EVS, 76.12% in Mathematics and 86.92% in Language scored more than 60% marks.

Classification of Test Items

Test items were claimed according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	1	0
25 to less than 50	Difficult	4	5	4
50 to less than 75	Average	11	8	14
75 to 100	Very Easy	25	26	20

No item in EVS and Math and only one item in Language was found very difficult. Nearly 10% items in each subject were difficult. However, 27% items in EVS, 20% in Language and 35% items in Mathematics belonged to the category of average difficulty. About 65% items in EVS and Language and 50% items in Mathematics were found very easy.

Table 25 Distribution of test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	4
.30 to less than .70	Average Discrimination	26	20	29
Less than .30	Poor Discrimination	14	20	5

No item in EVS and Language and 10% items in Mathematics had good DI i.e., more than 0.70. About 65% in EVS, 50% in Language and 72% in Mathematics had average value of DI. However, nearly 35% in EVS, 50% in Language and 12% in Mathematics were very easy, hence these were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.79	0.86
2	Mathematics	38	0.79	0.91
3	Language	40	0.65	0.80

The reliability co-efficient for EVS, Language and Mathematics were 0.79, 0.79 and 0.65, respectively.

IMPACT OF INTERVENING VARIABLES School

The availability of ancillary facilities helped the children in improving their learning achievement in EVS Mathematics and Language. Physical facilities did not make any impact for improving learning skills of children in the three subjects. Teaching—learning material contributed positively in EVS and Maths. PTR had negative association with achievement as expected.

Table 27: Regression and Correlation Co-efficient of the Predictors of School Related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	44.349	-	73.477	-	54.965	-
PTR	-0.148*	-0.195*	-0.114	-0.127	-0.027	-0.045
Com Participation	0.040	0.054	0.689	0.105	0.411	0.030
Tech-aid	0.394	0.142	0.202	0.161	0.042	0.009
Physical facility	0.080	0.132	0.169	0.161	0.027	0.040
Ancillary facility	2.009*	0.235**	1.186*	0.189**	1.187*	0.116*
Instructional time	0.016	0.125	0.013	0.063	0.050	0.125
Working day	0.133*	0.124	0.018	0.045	0.016	0.097
Index-Comp. TLM	0.513*	0.049*	0.374**	0.006**	0.304	0.004
R²	0.134		0.065		0.045	

The predictors explain 13.4% of total-variance in EVS, 6.5 in Mathematics and 4.5% in language.

Teacher

The qualification of teachers and teaching aids enhanced achievement of children in all three subjects on where as school organisation influence the learning achievement of children in EVS and Language. The positive association of school organisation with EVS and Language indicates that the help of senior colleagues of school organisation to the teachers help the children in improving their skills in these two subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	77.574	-	74.365	-	75.689	-
Index-Qualification	3.079**	0.192**	2.140*	0.096*	35.15**	0.210**
Index-Experience	0.618	0.011	0.124	0.026	0.154	0.021
Index-Teaching Aid	3.881**	0.178**	1.899*	0.076	1.857*	0.110*
Index-School Org.	0.061**	0.108	0.027	0.035	0.049**	0.010
R²	0.080		0.016		0.065	

The predictors explain 8.0% of total variance in EVS 1.6% in mathematics and 6.5% in Language independently.

Pupil

The teaching-learning process adopted by the teachers in school, schooling practices and percentage attendance of children in school influence the learning achievement of children in the three subjects. The positive association of these variables with the three criteria EVS, Mathematics and Language indicates that active involvement of teachers in school and attending school regularly help the children in improving their learning achievement in the three subjects. The positive association of educational status and

occupation of parents with the criterion EVS and Language indicates that this helps the children in improving their learning skills both the subject. The negative association of age of children with the two criteria Mathematics and Language indicates that children in higher age group scores poorly in these two subjects.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	67.285	-	66.281	-	76.728	-
Index-Ed & Occu.	2.352**	0.082**	0.093	0.026	0.946**	0.098**
Index-Schooling	2.630**	0.106**	2.815**	0.038	1.919**	0.132**
Index-TLP	7.474**	0.146**	4.035**	0.093**	3.524**	0.145**
Age	-0.207	-0.031	-0.235**	-0.032	-0.126**	-0.102**
Detention	-0.076	-0.012	-0.723**	-0.122**	-0.068	-0.009
Attendance	0.076*	0.112**	0.233**	0.028	0.113**	0.119**
R²	0.093		0.062		0.051	

The predictors explain 9.3% of total variance in EVS, 6.2% in Mathematics and 5.1% in Language.

Hard Sport of Learning

In EVS, no item is found very difficult. However, item No. 2, 10, 12 and 21 were found difficult. The hard spots were identification of natural features of the country, judicial functions of courts, system of governance in India and knowledge of composition of air.

In Language, item No. 38 was found very difficult and items 12, 14, 20, 36 and 39 were found difficult. The hard spots in Language were structure, vocabulary and comprehension of story.

Likewise, no item was found very difficult in Mathematics. However, item No.23, 26, 29 and 37 were found difficult. The difficult concepts were descending/ascending order of members, word problems, comparison of fraction, conversion from one unit to other and rounding of numbers.

Findings

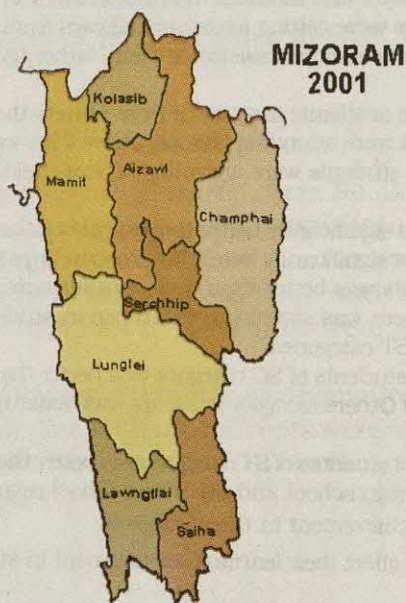
Analysis of the results signified that

- School bell, black board, chalk and duster and chairs for teachers were available in more than 91% schools.
- Musical instruments were available in approximately half schools.
- TV and computer were available in very few schools.
- More teaching aids, textbooks, workbooks and teachers' handbooks were available for primary classes in 2001 as compared to previous years.
- More students were getting the benefit under Mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 209.
- In rural areas Village Education Committees were in approximately 1/3rd schools.
- AEC, SMC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- School Management Committee was almost in all schools.
- Percentage of female teachers was higher than male teachers in urban schools.

- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil-teacher ratio was higher in rural than urban schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Degree holder female teachers were more in Mathematics, Language and Social Science than male teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- In general, teaching aids were more available to female teachers than male teachers in urban areas.
- Maximum in-service training programmes were conducted by DIET.
- Maximum in-service training programmes were conducted on 'Competency based Teaching-learning'.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by more than half of the teachers.
- Approximately 91% teachers have not attended any in-service training programme during last three years.
- For approximately 59% students, medium of instructions in the school was same as the language spoken at home.
- Percentage of fathers having degree or higher educational qualification was more than mothers.
- In general educational qualification of mothers was poorer than fathers.
- Majority of mother were housewives and fathers were farmers in rural areas.
- Majority of fathers were employer and mothers were housewives in urban areas.
- In most of the cases, teachers were getting assistance always from 'Head of Schools'.
- Students were getting more academic assistance from father/guardian than other family members.
- Urban girls were getting more academic assistance from fathers than brothers.
- Approximately, 88% students were attending schools above 70% working days.
- Approximately, less than 3% students were attending schools below 60% of the total working days.
- Achievement of rural girls was significantly better than rural boys across the subjects. In urban areas achievement of girls was significantly better than urban boys in EVS and Language only.
- Performance of urban students was better than their counterparts in rural areas.
- In EVS and Mathematics, there was significant difference in students' achievement between Others vs SC and Others vs ST categories.
- In Language, performance of students of SC category was better than Others and ST students.
- In rural areas, performance of Others category students was better than SC and ST students in EVS and Mathematics.
- In urban areas, performance of students of ST category was better than SC and Others students.
- Active involvement of teachers in school and attending school regularly by students help the children in improving their achievement in three subjects.
- Age of the students adversely affect their learning achievement in Mathematics and Language.

INTRODUCTION

Mizoram lying in the southern most of the North-Eastern states of India is covered by hills and deep valleys. It comprises of 8 districts such as, Aizawl, Champhai, Kolasib, Lunglei, Lawngthai, Mamit, Saiha and Serohhip. The literacy rate in the state is 88.49%.



Educationally the state is divided into 8 districts which is administered by the District Education Officers. The educational district is divided into sub-division which is administrated by the sub-divisional education officers and again sub-divided into circle which is looked after by the circle education officers. The school educational system is divided into 4 stages. For primary it is upto Class IV, middle school is from V-VII, High School is from VIII to X and for Higher Secondary it is XI and XII.

There are 851 schools having Class V and 5,747 teachers teaching in the middle schools. The number of students in these schools are 53,130. The school session is divided into 3 terms as 1st term, 2nd term, and 3rd term. Third term examination is used for assessing the promotion examination to the higher class. Public examinations are conducted in Classes IV, VII, X and XII by the Mizoram Board of School Education. In the remaining classes written examination is conducted by the respective schools.

SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total 169 schools were sampled from Aizawal, Champhai, Kolosib and Lawngtlai districts of Mizoram. Out of total sampled schools 46 schools were from Aizawal, 50 from Champhai, 44 from Kolosib and remaining 29 from Lawngtlai.

Areawise and management wise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	83	71	85.54	6	7.23	6	7.23
Urban	86	59	68.6	7	8.14	20	23.26
Total	169	130	76.92	13	7.69	26	15.38

Teachers

A total 457 teachers were sampled from 169 sampled schools. Out of 457 teachers, 345 were male teachers and 112 were female teachers. Areawise, 225 teachers were from rural areas and 232 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	3	1.6	184	98.4	0	0	0	0	187
	Female	1	2.63	37	97.37	0	0	0	0	38
	Total	4	1.78	221	98.22	0	0	0	0	225
Urban	Male	5	3.16	148	93.67	3	1.9	2	1.27	158
	Female	0	0	69	93.24	2	2.7	3	4.05	74
	Total	5	2.16	217	93.53	5	2.16	5	2.16	232
Total	Male	8	2.32	332	96.23	3	0.87	2	0.58	345
	Female	1	0.89	106	94.64	2	1.79	3	2.68	112
	Total	9	1.97	438	95.84	5	1.09	5	1.09	457

Table 2 shows that the percentage of male teachers was higher than female teachers in case of scheduled castes and scheduled tribes. Besides not a single teacher figured in OBC and Others categories, in the sample collected from rural areas.

Students

A total number of 2,392 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Aizawal	Rural	108	160	268
	Urban	163	185	348
	Total	271	345	616
Champhai	Rural	287	252	539
	Urban	216	147	363
	Total	503	399	902
Kolosib	Rural	177	138	315
	Urban	145	178	323
	Total	322	316	638
Lawngtlai	Rural	54	38	92
	Urban	70	74	144
	Total	124	112	236
Total	Rural	626	588	1214
	Urban	594	584	1178
	Total	1220	1172	2392

Out of 2,392 students, 1,214 students were from rural areas and remaining 1,178 students were from urban areas. Out of the total sample, 1,220 were boys and 1,172 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	4	4.82	2	2.41	79	95.18	2	2.41	0	0
Urban	19	22.09	1	1.16	79	91.86	6	6.98	0	0
Total	23	13.61	3	1.78	158	93.49	8	4.73	0	0

Table 4 indicates that out of 83 rural sampled schools, pre-school was attached with only 4 schools whereas in urban areas, out of 86 sampled schools, it was attached with 19 schools. Further, approximately 95% schools in rural areas and 92% schools in urban areas were elementary schools. The percentage of primary schools in the sampled schools was approximately 2% and 1% respectively for rural and urban areas. However, no school having sr. secondary classes figured in the sample.

Facilities related to teaching-learning process

It was observed that charts and game equipments were available in 76% to 78% schools. Magazines, journals and newspapers and children's book were available only in 12% to 14% schools. Reference books, dictionaries, encyclopedia was available in 46%

schools. Mini tool kit, Play material and toys were available in 31% schools. Further, Math kit was available in 67% schools. However, maps were available in 97% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs and tables for teachers and chalk and duster were available in 96% and more schools, whereas, water pitcher, ladel and glasses was available in 91% schools. Further, play ground, However, musical instruments were available in only 18% schools. Further, pin-up boards/notice boards were available in 66% schools.

Ancillary Facilities

Computer and TV facilities were available in only 2% schools. Annual medical check-up facilities for children, was available in 12% schools. Further, toilet facilities and safe drinking water facilities were available in 57% and 65% schools, respectively. Electric connection and immunisation facilities were available in 57% to 65% schools. Separate toilet for girls was available in only 20% schools.

Competency-based Teaching Materials

Information gathered shows that out of 169 schools, competency-based teaching aid were available in more schools than textbooks, workbooks and teachers' handbook. Workbooks were available in lesser number of schools as compared with remaining. However, textbooks and teachers' handbook were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the category wise and gender wise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	137	167	1191	1104	4	4	31	30	1363	1305
	%	1005	1280	8739	8460	029	031	227	230	100	100
Free uniform	N	0	5	858	859	0	0	0	0	858	864
	%	0	058	100	9942	0	0	0	0	100	100
Free textbooks	N	16	19	1100	1113	3	5	10	10	1129	1147
	%	142	166	9943	9704	027	044	089	087	100	100
Scholarship for regular attendance	N	5	10	1112	1148	0	0	0	0	1117	1158
	%	045	090	9955	9914	0	0	0	0	100	100
Other Schemes	N	0	0	962	965	0	0	0	0	962	965
	%	0	0	100	100	0	0	0	0	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. In case of mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes both boys and girls from only ST categories were more benefited.

Instructional Time

Average number of working days in schools was approximately 196 days.

Educational Committees

The data given in the Table 6 reveals that out of total 169 schools, 83(49%) schools were having Village Education Committees (VEC). Parent-Teacher Association, Area Education Committees and School-Management Committees were found more in rural schools than urban schools. PTA was found in 75% schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	53	30	83
	%	63.86	34.88	49.11
AEC	N	13	9	22
	%	15.66	10.47	13.02
SMC	N	53	52	105
	%	63.86	60.47	62.13
PTA	N	68	59	127
	%	81.93	68.6	75.15

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	83	312	68.12	146	31.88	458	6	25
Urban	86	309	53	274	47	583	7	32
Total	169	621	59.65	420	40.35	1041	6	28

Table 7 shows that overall percentage of male teachers was more than female teachers. The average number of teachers per school in rural and urban areas was 6 and 7, respectively. Further, average pupil-teacher ratio was 28:1. However, this ratio was approximately 32:1 in urban schools.

Educational Qualification

The percentage of male teachers having Post Graduate degree was more than female teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers studied upto secondary level had qualification higher than their counterparts. However, no female teacher was below Class X. Besides, only 15% teachers were having Class X level qualification. The data is given in table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	4	1.16	50	14.49	104	30.14	169	48.99	18	5.22	345
Female	0	0	19	16.96	29	25.89	61	54.46	3	2.68	112
Total	4	0.88	69	15.1	133	29.1	230	50.33	21	4.6	457

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	8	2.32	255	73.91	60	17.39	22	6.38	345
	Female	2	1.79	82	73.21	23	20.54	5	4.46	112
	Total	10	2.19	337	73.74	83	18.16	27	5.91	457
Science	Male	9	2.61	264	76.52	53	15.36	19	5.51	345
	Female	3	2.68	91	81.25	13	11.61	5	4.46	112
	Total	12	2.63	355	77.68	66	14.44	24	5.25	457
Language (Medium)	Male	12	3.48	82	23.77	106	30.72	145	42.03	345
	Female	6	5.36	33	29.46	31	27.68	42	37.5	112
	Total	18	3.94	115	25.16	137	29.98	187	40.92	457
Social Science	Male	9	2.61	193	55.94	73	21.16	70	20.29	345
	Female	3	2.68	71	63.39	25	22.32	13	11.61	112
	Total	12	2.63	264	57.77	98	21.44	83	18.16	457

The data reveals that in Mathematics, Science, Language and Social Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. The percentage of male teachers who studied Science and Language upto higher secondary level was more than female teachers. This trend was reverse for Mathematics and Social Science at secondary level. Besides, the percentage of female teachers who studied Science, Language and Social Science upto Class X was more than male teachers. Besides, only 3% teachers were below Class X.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
169	Male	218	93	7
	Female	57	34	1
	Total	275	127	8

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few male teachers were having M.Ed degree. However, only single female teacher was having M.Ed. degree. But 93 male and 34 female teachers were having B.Ed.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. Information collected indicates that all teaching aids were available to more than 85% teachers in urban schools. Also, the teaching aids were available to more than 88% teachers in rural schools, except Science and Mathematics kit.

In-service Training

The pattern of teachers who attended in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	3
	%	0.65
2. Block Resource Centre	N	14
	%	3.06
3. Teacher Resource Centre	N	3
	%	0.65
4. DIET	N	22
	%	4.81
5. SCERT	N	49
	%	10.72
7. Others	N	4
	%	0.87

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training' followed by 'Assessment of Pupil Learning'. Minimum programmes were conducted on 'Production of Instructional Material'.

Table 12: Themewise distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	26
2. Content Enrichment	14
3. Production of Instructional Material	1
4. Use of Instructional Material	13
5. Assessment of Pupil Learning	16
6. Competency based Teaching Learning	6
7. Activity based Joyful Learning	3
8. Others	20

Out of total 457 teachers, 368(80.53%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 80% and 82% respectively. However, percentage of female teachers who had not attended any training programme was more than their counterparts in both areas. The in-service training programme were organised by various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Most of the teachers attended the training programme conducted by DIET and SCERT.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	36	16	18	15
	%	40.45	17.98	8.99	16.85
Average	N	49	71	68	67
	%	55.06	79.77	76.40	75.28
Low	N	4	2	3	7
	%	4.49	2.25	3.37	7.87

It is evident that approximately 55% training programmes were averagely effective in terms of utility of knowledge gained during training programme. However, 40.45% programmes were rated as 'Highly useful'. Further, the impact of these training programmes was rated as 'average' by 75% to 80% teachers in these subjects. But only 91% to 187% teachers rated the programmes as Highly useful in these three subjects.

Academic Assistance received from various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes' as compared with head of the school.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 85% students in the schools was same as the language spoken at home and 25% students do not use their mother tongue for their medium of instruction.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	79	3.30	71	2.96
1. Illiterate	49	2.05	110	4.60
2. Literate	197	8.23	221	9.22
3. Primary	768	32.07	982	41.00
4. Secondary	879	36.70	797	33.28
5. Sr. Secondary	196	8.18	95	3.97
6. Degree and above	144	6.01	39	1.62
7. Do not Know/ Cannot say	80	3.34	77	3.22

Table 14 indicates that approximately 2% fathers and 5% mothers of the students were illiterate. Only 6% fathers and 2% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	45	57	102	60	72	132
Household/ Housewife	14	54	68	150	263	413
Farmer	31	64	95	26	26	52
Poultry farming	1	15	16	1	13	14
Agricultural labour	824	289	1113	716	245	961
Picking forest produce	4	5	9	12	22	34
Domestic Servant	12	35	47	137	290	427
Street Vender	0	1	1	12	23	35
Manual unskilled worker	23	52	75	15	21	36
Skilled worker	48	152	200	5	29	34
Clerical worker	121	315	436	22	58	80
Shopkeeper	16	44	60	26	69	95
Employer	3	16	19	1	3	4
Manager/Senior Officer	54	34	88	8	13	21
Others	18	45	63	23	31	54

In rural areas majority of mothers as well as fathers were agricultural labour. However in urban areas maximum mothers were housewives and fathers were clerk. Only few mothers and fathers were Managers/Senior Officers. Number of Manager/Senior Officer fathers were more in rural areas but mothers in the same category were more in urban areas. In decreasing order, fathers were working as agricultural labour, clerical worker, skilled worker, farmer, manager/senior officer, manual unskilled worker, household, others and shopkeepers etc. In decreasing order, mothers were working as agricultural labour, domestic servant, housewives, shopkeeper, clerical worker, farmer, others and manual unskilled worker etc.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	374	341	321	319	695	660
	%	59.74	57.99	54.04	54.62	56.97	56.31
Mother	N	332	334	313	296	645	630
	%	53.04	56.8	52.69	50.68	52.87	53.75
Elder Brother/Sister	N	267	256	267	272	534	528
	%	42.65	43.54	44.95	46.58	43.77	45.05
Others	N	52	38	79	100	131	138
	%	8.31	6.46	13.3	17.12	10.74	11.77

Girls and boys both in rural and urban areas (as well as overall) were getting more help from father/guardian than any other. However, in rural areas boys were getting more academic assistance than girls from father but the percentage was same in urban areas. The descending order of academic assistance provided by the family members was father, elder brother and sister.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys and girls attending school between 90-100% of working days was 79.26% and 78.24%

respectively. However, the percentage of boys and girls attending school between 80-90% of working days were 15.74% and 15.70% respectively. Only 3% boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Mizoram. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

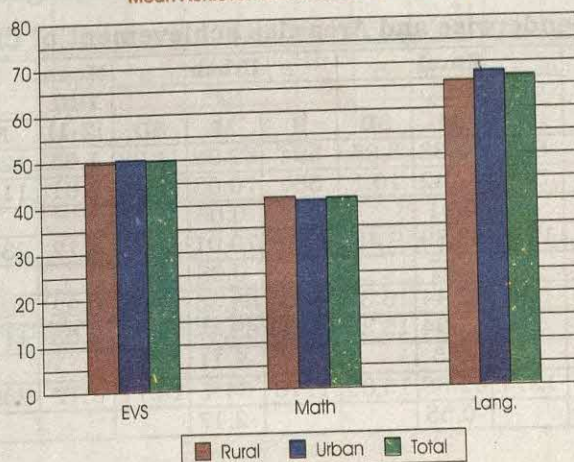
Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

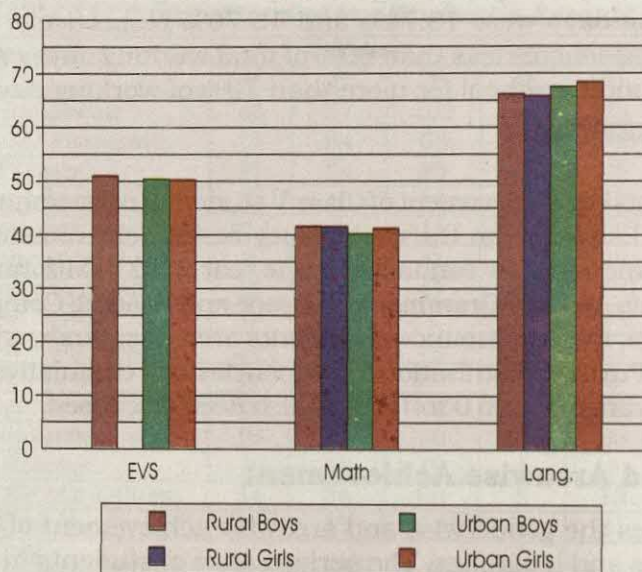
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	626	50.85	14.5	594	50.3	14.1	-0.55	1220	50.59	14.31	-0.67
	Girls	588	48.39	14.82	584	50.1	15.56	1.71	1172	49.24	15.21	1.93
	Diff.		2.46			0.2				1.35		
	Total	1214	49.66	14.7	1178	50.2	14.84	0.54	2392	49.93	14.77	0.89
	CR Value		2.92			0.23				2.23		
Mathe- matics	Boys	626	41.52	14.62	594	40.18	14.72	-1.34	1220	40.87	14.68	-1.59
	Girls	588	41.45	13.95	584	41.11	15.38	-0.34	1172	41.28	14.68	-0.4
	Diff.		0.07			-0.93				-0.41		
	Total	1214	41.49	14.3	1178	40.64	15.05	-0.85	2392	41.07	14.68	-1.42
	CR Value		0.09			-1.06				-0.68		
Langu- age	Boys	626	66.12	9.25	594	67.5	10.89	1.38	1220	66.79	10.1	2.38
	Girls	588	65.74	9.85	584	68.32	11.28	2.58	1172	67.03	10.66	4.17
	Diff.		0.38			-0.82				-0.24		
	Total	1214	65.93	9.54	1178	67.91	11.09	1.98	2392	66.91	10.38	4.68
	CR Value		0.69			-1.27				-0.56		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that there was no areawise differences in achievement of students. The achievement of boys was significantly better than girls. In rural areas also, boys performed significantly better than girls.

Mathematics

In Mathematics, there was no significant difference in achievement of boys and girls across and within areas.

Language

The data reveals that achievement of urban students, both boys and girls was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Gram- mar & Usage	Boys	626	68.33	8.85	594	69.98	11.22	1.65	1220	69.13	10.1	2.84
	Girls	588	67.42	10.1	584	70.03	11.21	2.61	1172	68.72	10.74	4.19
	Diff.		0.91			-0.05				0.41		
	Total	1214	67.89	9.48	1178	70.01	11.21	2.12	2392	68.93	10.42	4.99
	CR Value		1.67			-0.08				0.96		
Compre- hension	Boys	626	62.44	16.37	594	63.36	17.08	0.92	1220	62.89	16.72	0.96
	Girls	588	62.94	15.36	584	65.47	16.27	2.53	1172	64.2	15.86	2.74
	Diff.		-0.5			-2.11				-1.31		
	Total	1214	62.68	15.89	1178	64.4	16.71	1.72	2392	63.53	16.32	2.58
	CR Value		-0.55			-2.17				-1.97		

The data reveals that achievement of urban students, both boys and girls was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement of boys and girls.

Reading Comprehension

The data reveals that achievement of girls was significantly better than boys. The performance of urban girls was found to be significantly better than rural girls. In urban areas, girls performed significantly better than boys.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
EVS	Boys	15	51	9.1	119 9	50.5 5	14.3 5	6	57.08	16.7 6	6.08	0.84	6.53	0.95	0.45	0.19
	Girls	10	46	17.8 8	113 9	49.0 4	15.1	23	60.65	15.5 8	14.6 5	2.25	11.6 1	3.54	3.04	0.54
	Diff.		5			1.51			-3.57							
	Total	25	49.00	13.2 1	233 8	49.8 1	14.7 4	29	59.91	15.5 9	10.9 1	2.78	10.1	3.47	0.81	0.3
	CR Value		0.82			2.48			-0.47							
Mathematics	Boys	15	40.35	10.6	119 9	40.8 8	14.7 4	6	39.04	12.0 5	1.31	0.23	1.84	0.37	0.53	0.19
	Girls	10	45.26	4.26	113 9	41.1 8	14.7	23	44.16	16.4 1	-1.1	-0.3	2.98	0.86	4.08	2.88
	Diff.		-4.91			-0.3			-5.12							
	Total	25	42.32	8.86	233 8	41.0 3	14.7 2	29	43.1	15.5 6	0.78	0.23	2.07	0.71	1.29	0.72
	CR Value		-1.61			0.49			-0.85							
Language	Boys	15	66.5	9	119 9	66.7 8	10.1 1	6	69.58	12.5 9	3.08	0.55	2.8	0.54	0.28	0.12
	Girls	10	60	10.3 4	113 9	67.0 3	10.6	23	69.89	12.9 1	9.89	2.34	2.86	1.06	7.03	2.14
	Diff.		6.5			0.25			-0.31							
	Total	25	63.9	9.9	233 8	66.9	10.3 5	29	69.83	12.6 2	5.93	1.93	2.93	1.25	3	1.51
	CR Value		1.62			0.58			-0.05							

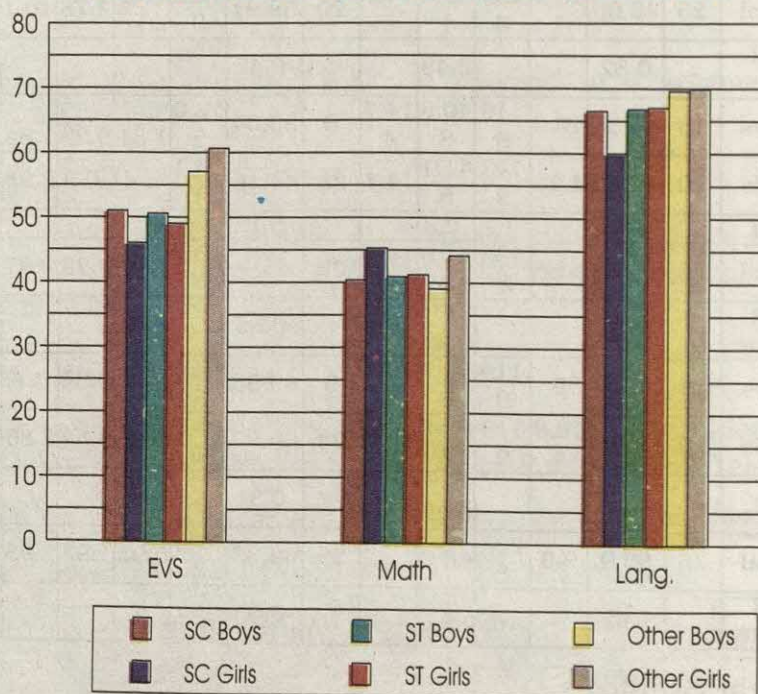
Environmental Studies

The data reveals that achievement of girls as well as total students of Others category was significantly better than their counterparts in SC and ST categories. In ST category, boys performed significantly better than girls.

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Mathematics

The data reveals that across the categories, differences in achievement were significant only between girls of ST and SC categories which favoured SC girls. Within categories, there was no significant difference in achievement of boys and girls.

Language

The data reveals that in case of girls, the differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST respectively. There was no significant difference in achievement of boys and girls within categories.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Boys	15	67.2	8.84	119 9	69.11	10.0 9	6	77.33	12.8 2	10.1 3	1.77	8.22	1.57	1.91	0.83
	Girls	10	61.6	10.7	113 9	68.78	10.6 9	23	69.22	12.6 2	7.62	1.78	0.44	0.17	7.18	2.11
	Diff.		5.6			0.33			8.11							
	Total	25	64.96	9.82	233 8	68.95	10.3 9	29	70.9	12.8 7	5.94	1.92	1.95	0.81	3.99	2.02
	CR Value		1.37		0.77				1.38							
Reading Comprehension	Boys	15	65.33	14.74	119 9	62.89	16.7 6	6	56.67	14.4 5	8.66	1.23	6.22	1.05	2.44	0.64
	Girls	10	57.33	16.39	113 9	64.12	15.8 1	23	71.01	17.0 1	13.6 8	2.18	6.89	1.93	6.79	1.3
	Diff.		8			-1.23			14.34							
	Total	25	62.13	15.6	233 8	63.49	16.3 1	29	68.05	17.3 1	5.92	1.32	4.56	1.41	1.36	0.43
	CR Value		1.24			-1.83			-2.09							

The data reveals that differences in achievement across the categories were significant only in case of girls as well as total students of ST and SC categories and were in favour of ST. There was no significant difference in achievement of boys and girls within categories.

Reading Comprehension

The data reveals that performance of girls of Others category was significantly better than SC girls. There was no category-wise significant differences in other cases. In Others category, girls performed significantly better than boys.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	12	51.88	8.9 3	1195	49.65	14.78	7	48.21	7.1 8	-3.67	-0.98	-	-	-2.23	-0.85
	Urban	13	46.35	16. 13	1143	49.99	14.69	22	63.64	15. 79	17.29	3.09	13.6 5	4.02	3.64	0.81
	Diff.		5.53			-0.34			-15.43							
	Total	25	49.00	13. 21	2338	49.81	14.74	29	59.91	15. 59	10.91	2.78	10.1	3.47	0.81	0.3
	CR Value		1.07			-0.56			-3.56							
Mathematics	Rural	12	40.57	10	1195	41.47	14.36	7	46.24	9.9 5	5.67	1.2	4.77	1.26	0.9	0.31
	Urban	13	43.93	7.7	1143	40.57	15.08	22	42.1	17. 04	-1.83	-0.43	1.53	0.42	-3.36	-1.54
	Diff.		-3.36			0.9			4.14							
	Total	25	42.32	8.8 6	2338	41.03	14.72	29	43.1	15. 56	0.78	0.23	2.07	0.71	-1.29	-0.72
	CR Value		-0.94			1.48			0.79							
Language	Rural	12	66.46	8.9 5	1195	65.96	9.54	7	61.07	10. 09	-5.39	-1.17	-	-	-0.5	-0.19
	Urban	13	61.54	10. 49	1143	67.89	11.04	22	72.61	12. 23	11.07	2.83	4.72	1.8	6.35	2.17
	Diff.		4.92			-1.93			-11.54							
	Total	25	63.9	9.9	2338	66.9	10.35	29	69.83	12. 62	5.93	1.93	2.93	1.25	3	1.51
	CR Value		1.26			-4.51			-2.50							

Environmental Studies

The data reveals that in urban areas, achievement of Others was significantly better than SC as well as ST students. In rural areas, there was no significant difference in achievement across the categories. In Others category, urban students performed significantly better than rural students.

Mathematics

In Mathematics, there was no significant difference in achievement of students across and within the categories.

Language

The data reveals that in urban areas, differences in achievement were significant between Others vs SC and ST vs SC, favouring Others and ST respectively. In ST and Others categories, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
Grammar & Usage	Rural	12	67.67	5.77	1195	67.93	9.5	7	61.71	10.29	5.96	1.41	6.22	-1.6	0.26	0.15
	Urban	13	62.46	12.17	1143	70.02	11.14	22	73.82	12.39	11.36	2.65	3.8	1.43	7.56	2.23
	Diff.		5.21			-2.09			12.11							
	Total	25	64.96	9.82	2338	68.95	10.39	29	70.9	12.87	5.94	1.92	1.95	0.81	3.99	2.02
	CR Value		1.38			-4.47			2.58							
Reading Comprehension	Rural	12	64.44	18.28	1195	62.68	15.87	7	60	16.78	4.44	0.54	2.68	0.42	1.76	0.33
	Urban	13	60	13.05	1143	64.33	16.73	22	70.61	17.05	10.61	2.07	6.28	1.71	4.33	1.19
	Diff.		4.44			-1.65			10.61							
	Total	25	62.13	15.6	2338	63.49	16.31	29	68.05	17.31	5.92	1.32	4.56	1.41	1.36	0.43
	CR Value		0.69			-2.44			-1.45							

The data reveals that in urban areas, differences in achievement were significant between Others vs SC and ST vs SC, favouring Others and ST respectively. In ST and Others categories, urban students performed significantly better than rural students.

Reading Comprehension

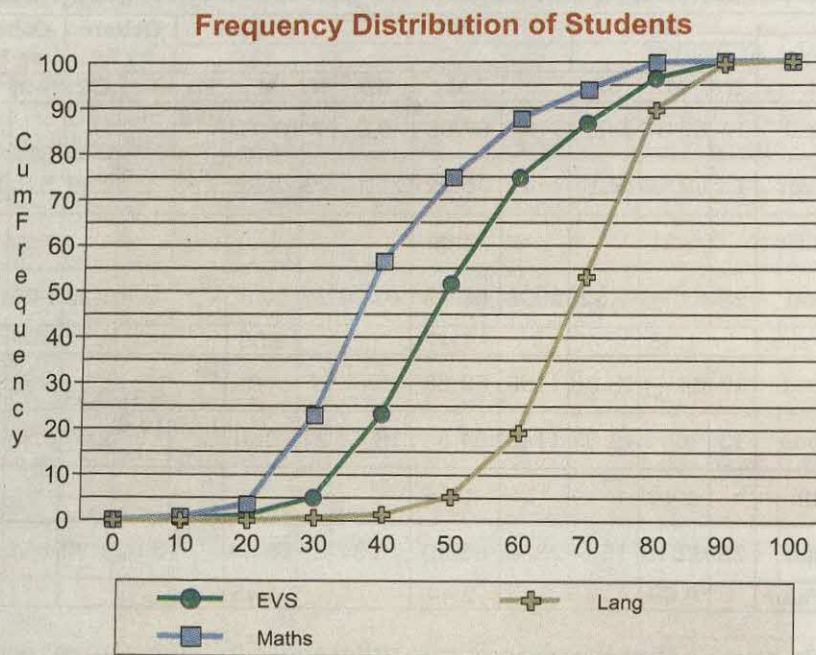
The data reveals that across the categories, differences in achievement were significant only in urban areas, that too between Others vs SC, favouring Others. In ST category, urban students performed significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	10	15	92	436	679	554	282	234	85	5
	cf	10	25	117	553	1232	1786	2068	2302	2387	2392
	cf(%)	0.42	1.05	4.89	23.12	51.51	74.67	86.45	96.24	99.79	100
Math	f	17	67	463	803	439	306	150	141	6	0
	cf	17	84	547	1350	1789	2095	2245	2386	2392	2392
	cf(%)	0.71	3.51	22.87	56.44	74.79	87.58	93.85	99.75	100	100
Language	f	0	0	14	18	92	335	812	868	239	14
	cf	0	0	14	32	124	459	1271	2139	2378	2392
	cf(%)	0	0	0.59	1.34	5.18	19.19	53.14	89.42	99.41	100

The figures posted in Table 23 reveals that in EVS the distribution of scores covered the entire range from 0-100 per cent. In Mathematics the distribution was spread in the range from 0-90 percent whereas in Language none of the students were in the range of 0-20 per cent. The maximum number of cases in EVS (679), in Mathematics



(803) and in Language (868) were in the range 40-50 per cent, 30-40 per cent and 70-80 percent. The 49.49% students in EVS, 25.21% in Mathematics and 94.82% in Language scored more than 50% marks whereas 25.33% in EVS, 12.42% in Mathematics and 80.81% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	4	7
25 to less than 50	Difficult	20	6	20
50 to less than 75	Average	18	10	8
75 to 100	Very Easy	1	20	3

About 21% items in Mathematics and 10% in Language were very difficult. About 50% items in EVS and Math were difficult also. However, in Language 50% items belonged to the category of very easy. Nearly 50% items in EVS and Maths were found difficult.

Table 25: Distribution of test items according to DI

Range of DI	Type of item	EVS	Lang.	Math
1.00 to .70	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	31	15	30
Less than .30	Poor Discrimination	9	25	8

No item in any subject had DI more than 0.70. About 75% item in EVS and Mathematics had average value of DI. However, in Language only 37% item had average DI. In Language since a large number of items were easy, hence there were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.72	0.76
2	Mathematics	38	0.73	0.77
3	Language	40	0.40	0.65

The co-efficient of reliability of EVS and Mathematics tests work satisfactory.

IMPACT OF INTERVENING VARIABLES

School

Help from the community through various committees influence the learning achievement of children in EVS, Mathematics and Language. The positive association of this variable with the three criterions indicates that active involvement of community through various committees teaching help the children in improving their learning achievement in three subjects. Ancillary facilities contribute in Language organisation.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	33.147	--	41.436	--	49.086	--
PTR	-0.010	-0.042	-0.011	-0.021	-0.044	-0.116
Com_Participation	0.526**	0.333**	0.887**	0.256**	0.041**	0.023**
Teach-aid	0.071*	0.136**	0.768	0.070	0.341	0.173*
Physical facility	0.043	0.019	0.648	0.085	0.118	0.180*
Ancillary facility	1.618*	0.103	0.419	0.059	0.666	0.219**
Instructional time	0.832	0.139	0.028	0.119	0.012	0.030
Working day	0.128	0.149	0.013	0.004	0.069	0.108
Index-Comp. TLM	0.166	0.048	0.427	0.078	-0.589	-0.017
R²	0.184		0.095		0.133	

The predictors explain 18.4% of total variance in EVS, 9.5% in Mathematics and 13.3% in Language.

Teacher

Teaching aids and teacher's qualifications influence the learning achievement of children in EVS, Mathematics and Language. The positive association of teaching aids and teachers' qualifications with the three criterions indicates that regular use of teaching

aids and qualification of teachers has helped the children in improving their scores in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	45.901	--	51.589	--	67.446	--
Index-Qualification	3.631**	0.147**	2.444*	0.159**	1.818**	0.144**
Index-Experience	0.795	0.029	0.099	0.012	0.497	0.010
Index-Teaching Aid	3.864**	0.213**	4.407**	0.159**	1.106	0.103*
Index-School Org.	0.441*	0.078	0.079	0.040	0.028	0.032
R²	0.053		0.058		0.027	

The predictors explain 5.3% of total variance in EVS, 5.8% in Mathematics and 2.7% in Language.

Pupil

By and large schooling practices teaching-learning processes adopted by teachers in school, percentage attendance of children in school and educational status and occupation of parents influence the learning achievement of children in three subjects i.e., EVS, Mathematics and Language. The positive association of schooling practices, teaching-learning processes adopted by teachers with the three criteria indicates that active involvement of teachers in school help the children in improving their learning achievement in EVS and Mathematics. The negative association of age of children with the criteria indicates that children in higher age group score poorly. The positive association of educational status and occupation of parents with the two criteria help the children in improving their score in EVS and language.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	49.800	--	29.986	--	67.368	--
Index-Ed & Occu	2.472**	0.110**	0.069	0.067	1.198**	0.007*
Index-Schooling	0.081	0.003	0.754	0.013**	0.361	0.001
Index-TLP	3.496**	0.090**	3.379**	0.123	0.927	0.032
Age	-0.776*	-0.008	-0.677*	-0.040	-0.562	-0.039
Detention	-0.523**	-0.147**	-0.450**	-0.028*	-0.055**	-0.083**
Attendance	0.091**	0.108**	0.040*	0.080	0.057	0.001
R²	0.051		0.030		0.013	

The predictors explain 5.1% of total variance in EVS, 3.0% in Mathematics and 1.3% in language independently.

One can infer that active involvement of teachers in the school and parents at home, use of teaching aids in the school and qualifications of teachers help the children in improving the learning skills in the three subjects. Active involvement of community

through various committees also help the children in improving their learning achievement in the three subjects.

Hard Sport of Learning

In EVS, item No. 15 was found very difficult. However, 20 (50%) items were found difficult. The hard spots were identification of natural features of the country, at varying identification of a state on the map, boundaries with neighbouring countries, identification of poles, judicial functions of courts, recognition of first President of India, system of governance in India, Gandhiji strategy for freedom struggle, farmer's role in freedom struggle, knowledge of solar system, planets etc., understanding of eclipse, knowledge of composition of air, knowledge of pollution of free fuel, knowledge of soil erosion, effects of force, knowledge of plants in deserts, conservation of wild animals and safety measures during cooking.

In Language, items 15, 16, 23 and 38 were found very difficult and items 14, 17, 18, 21, 36 and 39 were found difficult. The hard spots were comprehension of instructions, and comprehension of story.

In Mathematics, items 5, 11, 25, 29, 34, 37 and 39 were found very difficult and 20(52%) items were found difficult. The hard spots were ascending/descending order, use of ordering symbols, HCF, LCM, division, unitary method, average, profit and loss, triangle according to angles, simple interest, word problem on addition, time, simplification, word problems fraction on comparison, division, word problem on subtraction, conversion from one unit to other, conversion from percent to fraction, percent, word problem on percent, BODMAS, subtraction of fraction, rounding of numbers and circle-radius-diameter concept.

FINDINGS

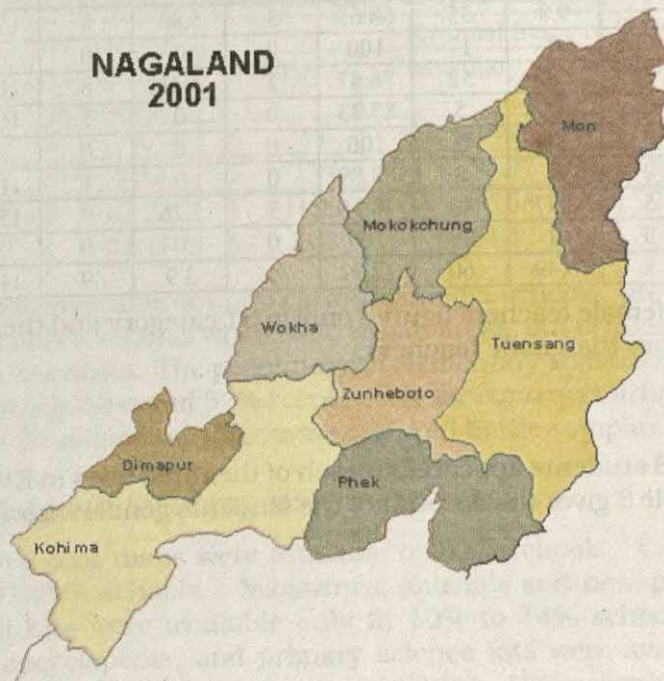
Analysis of the results signified that

- Computer was available in only 2% schools.
- Competency based teaching materials were more available in the 2001 than previous year.
- Free uniform and scholarship for regular attendance were provided between 8% to 11% students.
- Average number of working days were about 196 in a year.
- Pupil-Teacher ratio was higher in urban schools as compared with rural schools.
- Approximately, 1% teachers had qualification below Class X.
- The number of male teachers having qualification below Class X was higher than female teachers in all subjects at primary level.
- Teaching aids were more available to teachers teaching in urban schools than teachers teaching in rural schools.
- The maximum number of in-service training programmes were organised on the theme general training and competency based teaching learning.
- Most of the teachers were getting assistance from the Head of the schools.
- Approximately, 98% fathers and 95% mothers were literate.
- Majority of mothers were agricultural labour and domestic servant in rural and urban areas respectively.
- Percentage of girls attending 90-100% of school days were higher than boys.
- Musical instruments were available, approximately 18% schools.
- Pre-schools were attached only in few schools.
- Competency based textbooks workbooks and teachers' handbooks were available for very few schools till year 2001.

- Approximately 1/4th students were getting the benefit under mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Approximately 2/3rd schools in rural areas were having Village Education Committees. AEC, SMC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Percentage of female teachers having PG degree was less than male teachers.
- Not a single female teacher was below Class X passed. More PG degree holder male teachers who studied Mathematics, Language and Social Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- In general teaching aids were more available to female teachers than male teachers.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted by SCERT.
- Maximum in-service training programmes were conducted on 'General Training and minimum on 'Production of Instructional Material' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'average' by majority of teachers.
- Approximately 81% teachers have not attended any in-service training programme during last three years.
- In general educational qualification of mother was poorer than fathers.
- Majority of mothers and fathers were agricultural labour.
- For approximately 85% students medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members. Rural boys were getting more academic assistance from fathers than girls in rural areas.
- Approximately 87% students were attending schools above 70% working days.
- Approximately less than 2% students were attending schools below 60% of the total working days.
- Achievement of rural boys was significantly better than rural girls in EVS. No significant difference in achievement was there in urban area.
- Performance of urban students was significantly better than their counterparts in rural areas in Language only.
- In Language and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In urban areas, performance of students of Others category was better than SC students in EVS and Language.
- Active involvement of community through various committees help the children in improving their learning achievement in the three subjects.
- Active involvement of teachers in school, use of teaching aids in school and qualification of teachers help the children in improving their learning achievement in the three subjects.
- Availability of ancillary facility in the school has helped the children in improving their Language & Mathematics.
- Parents' education helps students achievement in EVS and Language.

INTRODUCTION

Nagaland, like most of the other states is developing very fast in all walks of life in general and education in particular. Right after independence, the state has done a stupendous growth in literacy. The state has now 67.11% of literacy which is a little high than national average. For male it is 71.77% and 61.92% for female (Census of India, 2001). The year 1963 is considered as the red letter year because this year the interim government was set up in the state. Thus, the situation got improved to a great extent and opening of schools went on increasing leaps and bounds. Today, the state has 1,499 primary schools (selected educational statistics, 2001). The pupil-teacher ratio is an ideal which is 20:1 for rural school whereas it is 25:1 for urban schools. The Gross Enrolment Ratio is 91 girls per 100 boys. There are 8 districts in the state.



SAMPLE

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total of 72 schools were sampled from Dimapur, Kohima, Tuensang and Wokha districts of Nagaland. Out of total sampled schools, 21 were from Dimapur, 21 from Kohima, 11 from Tuensang and remaining 19 from Wokha.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	63	62	98.41	0	0	1	1.59
Urban	9	8	88.89	1	11.11	0	0
Total	72	70	97.22	1	1.39	1	1.39

Teachers

A total of 77 teachers were sampled from 72 sampled schools. Out of 77 teachers, 57 were male teachers and 20 were female teachers. Areawise, 68 teachers were from rural areas and 9 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	5	9.8	35	68.63	3	5.88	8	15.69	51
	Female	0	0	17	100	0	0	0	0	17
	Total	5	7.35	52	76.47	3	4.41	8	11.76	68
Urban	Male	0	0	5	83.33	0	0	1	16.67	6
	Female	0	0	3	100	0	0	0	0	3
	Total	0	0	8	88.89	0	0	1	11.11	9
Total	Male	5	8.77	40	70.18	3	5.26	9	15.79	57
	Female	0	0	20	100	0	0	0	0	20
	Total	5	6.49	60	77.92	3	3.9	9	11.69	77

Table 2 shows that female teachers figured only in ST category and their percentage in this category was more than male teachers.

Students

A total number of 1,038 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Dimapur	Rural	138	110	248
	Urban	58	49	107
	Total	196	159	355
Kohima	Rural	133	188	321
	Urban	17	20	37
	Total	150	208	358
Tuensang	Rural	40	43	83
	Urban	8	12	20
	Total	48	55	103
Workha	Rural	78	95	173
	Urban	19	30	49
	Total	97	125	222
Total	Rural	389	436	825
	Urban	102	111	213
	Total	491	547	1038

Out of 1,038 students, 825 students were from rural areas and remaining 213 students were from urban areas. Out of the total sample, 491 were boys and 547 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of Terminal Stage of School and Pre-school

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	6	9.52	5	7.94	34	53.97	24	38.1	0	0
Urban	2	22.22	1	11.11	5	55.56	2	22.22	1	11.11
Total	8	11.11	6	8.33	39	54.17	26	36.11	1	1.39

Table 4 indicates that out of 57 rural sampled schools, pre-primary classes were attached with only 6 schools whereas in urban areas, out of 20 sampled schools, it was attached with 2 schools. The percentage of elementary schools in the sampled schools was approximately 54% and 57% respectively for rural and urban areas. However, no school having Sr. secondary classes was figured in the sample of rural areas.

Facilities related to teaching-learning process

It was observed that maps were available in 90% schools. Charts and globes were available in 71.72% schools. Magazines, journals and newspapers, play materials, and mini tool kits were available only in 10% to 14% schools. Reference books, dictionaries, encyclopedia, and primary science kits were available in 32% to 39% schools. Besides, children books were available in 18% schools.

Infrastructural facilities

It was observed that school bell, tables and chairs for teachers were available in 85% to 89% schools, whereas, blackboard and chalk and duster were available in 93.94% schools. Water pitcher, ladel and glasses, pin up board/notice board, dustbin were available in 35% to 49% schools. Besides, play ground was available in 54% schools. However, musical instruments were available in only one school.

Ancillary Facilities

TV, separate toilet for girls annual medical check up for children facilities were available in 15% schools. Immunisation facilities and first aid kit were available in 13% and 17% schools respectively. Besides, safe drinking water and electric connection facilities were available in 24% - 25% schools. Toilet facility was available in 38% schools. However, computer facility was available in 7% schools.

Competency based Teaching Materials

Information gathered shows that out of 72 schools, competency based text books were available in 2 to 6 schools for Classes I to V in the year 2001, against for Class II in one school in the year 1998.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	74	51	398	382	29	23	78	27	579	483
	%	12.78	10.56	68.74	79.09	5.01	4.76	13.47	5.59	100	100
Free uniform	N	0	0	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0	0	0
Free textbooks	N	15	15	120	137	0	0	0	0	135	152
	%	11.11	9.87	88.89	90.13	0	0	0	0	100	100
Scholarship for regular attendance	N	0	1	4	18	0	0	0	0	4	19
	%	0	5.26	100	94.74	0	0	0	0	100	100
Other Schemes	N	0	0	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0	0	0

In primary classes in the state approximately 69% boys and 80% girls from ST Category were getting Mid-day meal. Free uniform facility and other schemes were availed many student. Free textbooks were distributed mostly to ST boys and girls i.e., approximately, 90%.

Instructional Time

Average number of working days in schools was approximately 184 days on an average, schools were having 7 periods in a day of approximately of 39 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of the total of 57 rural schools, 26(41.27%) schools were having Village Education Committees (VEC). Parent-Teacher Association, Area Education Committees and School-Management Committees were found more in urban schools than rural schools in terms of percentage. However, School Management Committee was observed in 64% schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	26	3	29
	%	41.27	33.33	40.28
AEC	N	10	2	12
	%	15.87	22.22	16.67
SMC	N	40	6	46
	%	63.49	66.67	63.89
PTA	N	9	2	11
	%	14.29	22.22	15.28

TEACHERS PROFILE

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	63	325	60.41	213	39.59	538	9	29
Urban	9	49	39.84	74	60.16	123	14	34
Total	72	374	56.58	287	43.42	661	9	30

Table 7 shows that overall number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was approximately 9 and 14 respectively. Further, average teacher pupil ratio was 1:30, however, this ratio was 1:34 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers studied upto sr. secondary level was higher than their counterparts. However, percentage of male teachers who had studied upto was Class X was more than female teachers. Besides, not a single teacher was below Class X level. The data is given in table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	7	12.28	5	8.77	44	77.19	1	1.75	57
Female	0	0	2	10	5	25	11	55	2	10	20
Total	0	0	9	11.69	10	12.99	55	71.43	3	3.9	77

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	0	0	40	70.18	4	7.02	13	22.81	57
	Female	4	20	14	70	1	5	1	5	20
	Total	4	5.19	54	70.13	5	6.49	14	18.18	77
Science	Male	1	1.75	37	64.91	7	12.28	12	21.05	57
	Female	2	10	17	85	1	5	0	0	20
	Total	3	3.9	54	70.13	8	10.39	12	15.58	77
Language (Medium)	Male	2	3.51	21	36.84	10	17.54	24	42.11	57
	Female	1	5	7	35	3	15	9	45	20
	Total	3	3.9	28	36.36	13	16.88	33	42.86	77
Social Science	Male	1	1.75	40	70.18	6	10.53	10	17.54	57
	Female	2	10	14	70	1	5	3	15	20
	Total	3	3.9	54	70.13	7	9.09	13	16.88	77

The data reveals that in Mathematics, Science and Social Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. However, this was reverse in case of Science. Similarly, the percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than female teachers. The same trend may be observed for secondary level except in Science. Besides, the percentage of female teachers who studied Mathematics, language, Science and Social Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
72	Male	25	19	1
	Female	3	7	0
	Total	28	26	1

Approximately half teacher had diploma/certificate in Primary/Elementary Education and only one male teacher was having M.Ed degree. However, not a single female teacher was M.Ed. degree holder. Besides, approximately, half teachers had B.Ed. degree.

Availability of Teaching Aids

All teaching aids were available to more than 85% teachers in urban schools. However, charts were available in all schools. In rural schools, almost all teaching aids were available to 88% and above teachers except science kit, mathematic kit and others. Genderwise, all teaching aids such as teachers' guide, dictionary, maps, globe, charts, flash cards, science kit, mathematics kit were more available to female teachers teaching in urban schools than male teachers. This trend was almost similar in rural areas, except for maps, charts, flash cards and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	0
	%	0
2. Block Resource Centre	N	0
	%	0
3. Teacher Resource Centre	N	0
	%	0
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	2
	%	14.29
6. SCERT	N	10
	%	71.43
7. Others	N	2
	%	14.29

Data portrays that out of 77 sampled teachers, only 14(18.18%) had in-service training during last three years. Among which the maximum of 10(71%) teachers were given training by SCERT followed by two by DIETs and Others (14.5%).

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training Programme', followed by 'Competency Based Teaching-Learning'. However, not a single programme was conducted on Content Enrichment, Use of Instructional Material, Assessment of Pupil Learning and Activity based Teaching Learning'.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	5
2. Content Enrichment	0
3. Production of Instructional Material	1
4. Use of Instructional Material	0
5. Assessment of Pupil Learning	0
6. Competency based Teaching Learning	2
7. Activity based Joyful Learning	0
8. Others	8

Out of total 77 teachers, 62(80.52%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 79% and 85% respectively. However, percentage of female teachers who had not attended any training programme in rural schools was more than their counterparts. But in urban areas the percentage was almost same.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	4	4	4	1
	%	26.67	26.67	26.67	6.67
Average	N	10	10	9	11
	%	66.67	66.67	60.00	73.33
Low	N	1	1	2	3
	%	06.66	6.66	13.33	20.00

It is evident that approximately 67% training programmes were 'average' effective in terms of utility of knowledge gained during training programmes. Only 27% programmes were considered as 'highly' useful. The impact of these training programmes were rated as average by 60% to 73% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 7% to 27% teachers.

Assistant received from various Sources

The teachers both in rural and urban areas were getting maximum 'ALWAYS' assistance from 'Head of the School' followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that the medium of instruction for approximately 62% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Students' Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	83	8.00	78	7.51
1. Illiterate	212	20.42	396	38.15
2. Literate	305	29.38	284	27.36
3. Primary	146	14.07	129	12.43
4. Secondary	175	16.86	97	9.34
5. Sr. Secondary	69	6.65	20	1.93
6. Degree and above	17	1.64	5	0.48
7. Do not Know/ Cannot say	31	2.99	29	2.79

Table 14 indicates that approximately 20% fathers and 38% mothers of the students were illiterate. Only approximately 2% fathers and less than 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or were only literate. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	39	24	63	22	10	32
Household/ Housewife	22	9	31	487	149	636
Farmer	401	78	479	251	16	267
Poultry farming	11	0	11	2	0	2
Agricultural labour	70	13	83	21	12	33
Picking forest produce	1	1	2	0	0	0
Domestic Servant	7	4	11	2	2	4
Street Vender	0	0	0	0	4	4
Manual unskilled worker	21	2	23	3	0	3
Skilled worker	27	6	33	3	1	4
Clerical worker	64	12	76	12	5	17
Shopkeeper	17	5	22	10	2	12
Employer	97	44	141	8	11	19
Manager/Senior Officer	15	0	15	1	0	1
Others	33	15	48	3	1	4

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas also majority of mothers were housewives and fathers were farmers. Only few fathers and just one mother were Manager/Senior Officers. In decreasing order fathers were farmer, working as employer, agricultural labour, clerical worker, other occupation, skilled worker, household worker and manual unskilled worker etc. In decreasing order mothers were working as household/housewives, farmer, agricultural labour, employer, clerical worker etc.

Academic Assistance Received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance Received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	180	218	45	39	225	257
	%	46.27	50	44.12	35.14	45.82	46.98
Mother	N	123	134	17	17	140	151
	%	31.62	30.73	16.67	15.32	28.51	27.61
Elder Brother/Sister	N	188	225	36	49	224	274
	%	48.33	51.61	35.29	44.14	45.62	50.09
Others	N	19	22	3	6	22	28
	%	4.88	5.05	2.94	5.41	4.48	5.12

Girls and boys in rural areas were getting more help from elder brother/sister than any other. Also in urban areas and overall girls were getting more academic assistance from elder brother/sister. But in urban areas and overall boys were getting more assistance from father/guardian than any other.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls. It was also true for both rural and urban areas. However, the percentage of girls attending school between 70% - 80% and 80% - 90% of working days is more than boys. Only 3-4% percent boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency based achievement tests administered during the achievement survey conducted in the year 2002 in Nagaland. The language test had two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

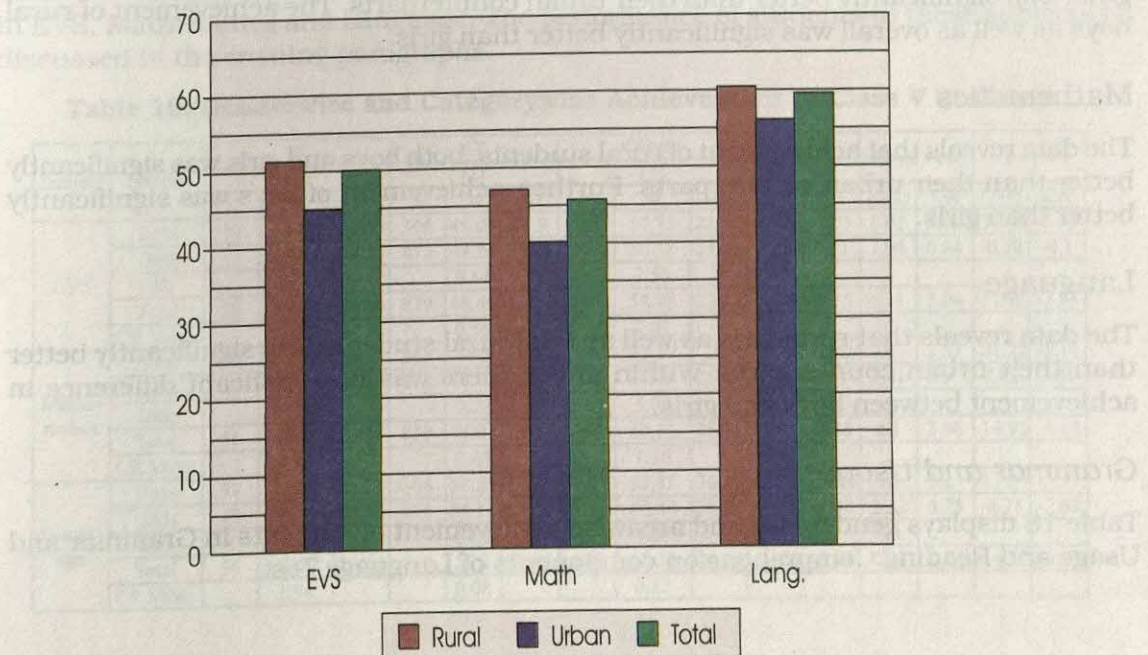
Genderwise and Areawise Achievement

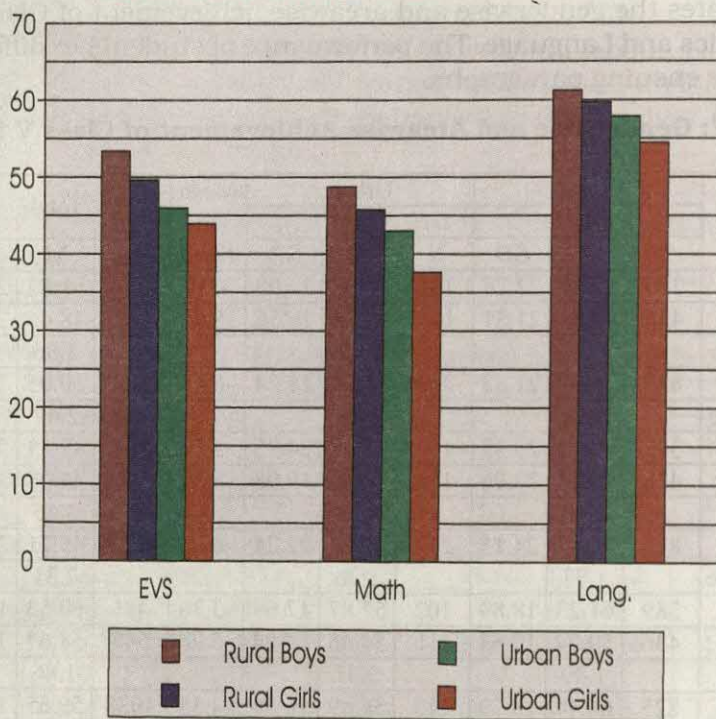
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	389	53.36	22.26	102	45.96	22.98	-7.4	491	51.82	22.59	-2.91
	Girls	436	49.61	21.31	111	43.94	19.56	-5.67	547	48.46	21.07	-2.68
	Diff.		3.75			2.02				3.36		
	Total	825	51.38	21.83	213	44.91	21.24	-6.47	1038	50.05	21.86	-3.94
	CR Value		2.46			0.69				2.47		
Mathematics	Boys	389	48.72	25.35	102	42.98	24.25	-5.74	491	47.53	25.21	-2.11
	Girls	436	45.73	22.96	111	37.6	19.98	-8.13	547	44.08	22.6	-3.71
	Diff.		2.99			5.38				3.45		
	Total	825	47.14	24.15	213	40.18	22.24	-6.96	1038	45.71	23.92	-4
	CR Value		1.77			1.76				2.31		
Language	Boys	389	61.23	18.89	102	57.87	17.68	-3.36	491	60.53	18.67	-1.68
	Girls	436	59.74	17.53	111	54.46	14.94	-5.28	547	58.67	17.15	-3.2
	Diff.		1.49			3.41				1.86		
	Total	825	60.44	18.19	213	56.09	16.36	-4.35	1038	59.55	17.91	-3.38
	CR Value		1.17			1.51				1.67		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise

Environmental Studies

The data given in Table 17 reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. The achievement of rural boys as well as overall was significantly better than girls.

Mathematics

The data reveals that achievement of rural students, both boys and girls was significantly better than their urban counterparts. Further, achievement of boys was significantly better than girls.

Language

The data reveals that rural girls as well as total rural students was significantly better than their urban counterparts. Within areas, there was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	389	65	19.27	102	60.86	17.46	-4.14	491	64.14	18.96	-2.08
	Girls	436	62.99	18.56	111	57.95	15.41	-5.04	547	61.97	18.07	-2.94
	Diff.		2.01			2.91				2.17		
	Total	825	63.94	18.91	213	59.34	16.45	-4.6	1038	62.99	18.52	-3.52
	CR Value		1.52			1.29				1.88		
Compre- hension	Boys	389	54.94	21.93	102	52.88	22.6	-2.06	491	54.51	22.06	-0.82
	Girls	436	54.33	20.34	111	48.65	19.97	-5.68	547	53.18	20.38	-2.67
	Diff.		0.61			4.23				1.33		
	Total	825	54.62	21.09	213	50.67	21.32	-3.95	1038	53.81	21.19	-2.42
	CR Value		0.41			1.44				1.01		

The data reveals that achievement of rural students, both boys and girls was significantly better than their urban counterparts. There was no genderwise differences in achievement in both rural and urban areas.

Reading Comprehension

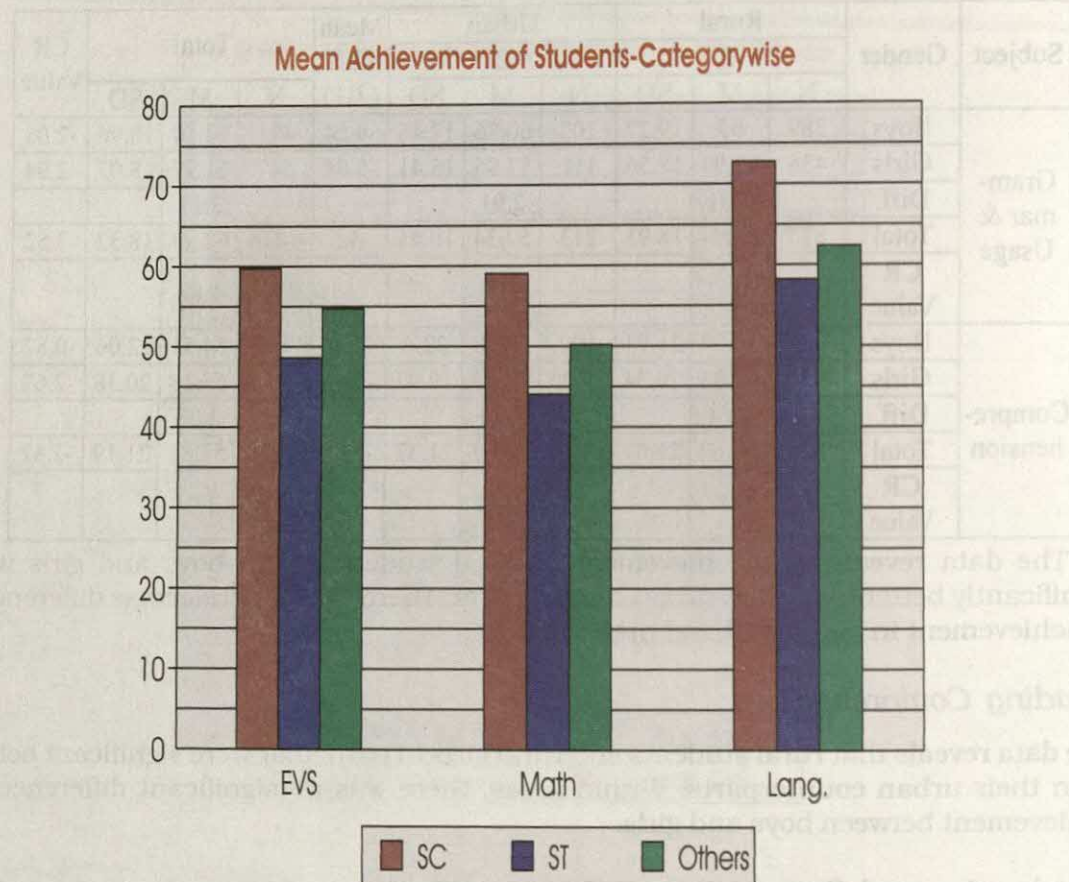
The data reveals that rural students and rural girls in particular were significant better than their urban counterparts. Within areas, there was no significant difference in achievement between boys and girls.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	39	64.49	23.13	366	49.08	21.9	86	57.73	22.42	-6.76	-1.53	8.65	3.23	-15.41	-3.98
	Girls	17	48.82	24.26	473	48.24	20.91	57	50.18	21.71	1.36	0.21	1.94	0.64	-0.58	-0.1
	Diff.		15.67			0.84			7.55							
	Total	56	59.73	24.36	839	48.61	21.34	143	54.72	22.37	-5.01	-1.33	6.11	3.04	-11.12	-3.33
	CR Value		2.25			0.56			2.01							
Mathematics	Boys	39	65.72	24.55	366	44.5	24.27	86	52.17	25.5	-13.55	-2.82	7.67	2.53	-21.22	-5.14
	Girls	17	43.65	24.35	473	43.73	22.2	57	47.14	25.49	3.49	0.51	3.41	0.97	0.08	0.01
	Diff.		22.07			0.77			5.03							
	Total	56	59.02	26.34	839	44.07	23.11	143	50.17	25.53	-8.85	-2.15	6.1	2.68	-14.95	-4.14
	CR Value		3.11			0.47			1.16							
Language	Boys	39	75.26	16.76	366	58.25	17.66	86	63.55	20.36	-11.71	-3.38	5.3	2.23	-17.01	-5.99
	Girls	17	66.91	13.36	473	58.16	16.57	57	60.48	21.84	-6.43	-1.48	2.32	0.78	-8.75	-2.63
	Diff.		8.35			0.09			3.07							
	Total	56	72.72	16.15	839	58.2	17.05	143	62.33	20.94	-10.39	-3.74	4.13	2.24	-14.52	-6.49
	CR Value		1.98			0.08			0.85							



Environmental Studies

The data reveals that achievement of SC students was better than Others followed by ST students and differences in achievement were significant between Others vs ST and ST vs SC. Similar was the case with the achievement of boys. In SC and Others categories, performance of boys was significantly better than girls.

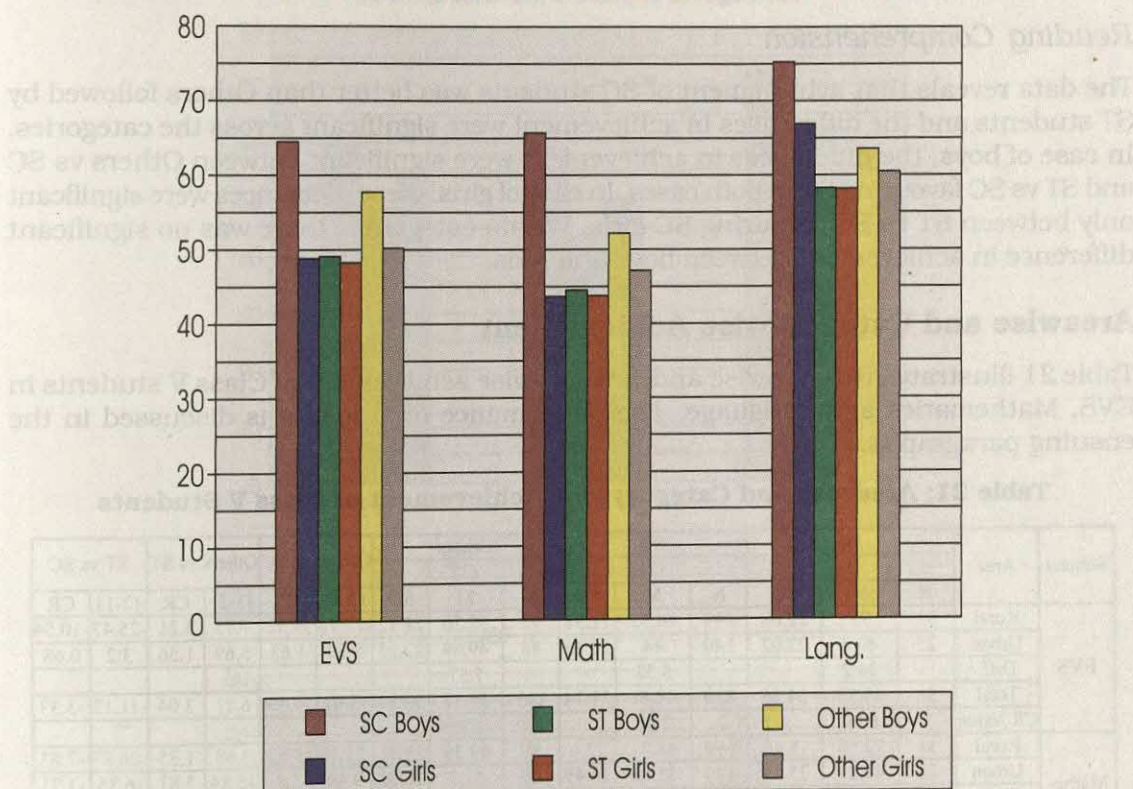
Mathematics

The data reveals that achievement of SC students was better than Others followed by ST students and the differences in achievement were significant across the categories. In SC category boys performed significantly better than girls.

Language

The data reveals that achievement of students, both boys and girls of SC category were better than their counterparts in Others followed by ST categories and categorywise

Mean Achievement of Students-Genderwise



differences were significant for boys and total students. In SC category, boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise Achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	39	76.51	17.49	366	62.07	18.26	86	67.35	20.14	-9.16	-2.58	5.28	2.23	-14.44	-4.88
	Girls	17	68.47	13.11	473	61.59	17.66	57	63.16	22.18	-5.31	-1.23	1.57	0.52	-6.88	-2.1
	Diff.		8.04			0.48			4.19							
	Total	56	74.07	16.59	839	61.8	17.91	143	65.68	21	-8.39	-2.97	3.88	2.08	-12.27	-5.33
	CR Value		1.90			0.38			1.15							
Reading Comprehension	Boys	39	73.16	18.38	366	51.89	21.17	86	57.21	23.1	-15.95	-4.14	5.32	1.95	-21.27	-6.76
	Girls	17	64.31	16.99	473	52.43	19.85	57	56.02	24.36	-8.29	-1.58	3.59	1.07	-11.88	-2.81
	Diff.		8.85			-0.54			1.19							
	Total	56	70.48	18.28	839	52.2	20.43	143	56.74	23.54	-13.74	-4.38	4.54	2.17	-18.28	-7.19
	CR Value		1.75			-0.38			0.29							

The data reveals that achievement of students, both boys and girls of SC category were better than their counterparts in Others followed by ST category and the differences in achievement across the categories were significant in all cases except for

girls between Other vs SC and Others vs ST. Within the categories boys were performed better than girls though it was not significant.

Reading Comprehension

The data reveals that achievement of SC students was better than Others followed by ST students and the differences in achievement were significant across the categories. In case of boys, the differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In case of girls, these differences were significant only between ST vs SC favouring SC girls. Within categories, there was no significant difference in achievement between boys and girls.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Rural	31	75	12.68	699	49.53	21.38	95	57.26	22.12	-17.74	-5.52	7.73	3.21	-25.47	-10.54
	Urban	25	40.8	22.02	140	44	20.63	48	49.69	22.23	8.89	1.63	5.69	1.56	3.2	0.68
	Diff.		34.2			5.53			7.57							
	Total	56	59.73	24.36	839	48.61	21.34	143	54.72	22.37	-5.01	-1.33	6.11	3.04	-11.12	-3.33
	CR Value		6.90			2.88			1.93							
Mathematics	Rural	31	72.58	18.46	699	45.71	23.6	95	49.39	25.11	-23.19	-5.52	3.68	1.35	-26.87	-7.83
	Urban	25	42.21	25.14	140	35.86	18.49	48	51.7	26.53	9.49	1.5	15.84	3.83	-6.35	-1.21
	Diff.		30.37			9.85			-2.31							
	Total	56	59.02	26.34	839	44.07	23.11	143	50.17	25.53	-8.85	-2.15	6.1	2.68	-14.95	-4.14
	CR Value		5.04			5.48			0.50							
Language	Rural	31	73.87	17.91	699	59.4	17.54	95	63.74	20.85	-10.13	-2.62	4.34	1.94	-14.47	-4.41
	Urban	25	71.3	13.9	140	52.2	12.8	48	59.53	21.06	-11.77	-2.86	7.33	2.27	-19.1	-6.4
	Diff.		2.57			7.2			4.21							
	Total	56	72.72	16.15	839	58.2	17.05	143	62.33	20.94	-10.39	-3.74	4.13	2.24	-14.52	-6.49
	CR Value		0.60			5.67			1.13							

Environmental Studies

The data reveals that in rural areas, achievement of SC students were better than Others followed by ST students and the differences in achievement were significant across the categories. In SC and ST categories, performance of rural students was significantly better than urban students.

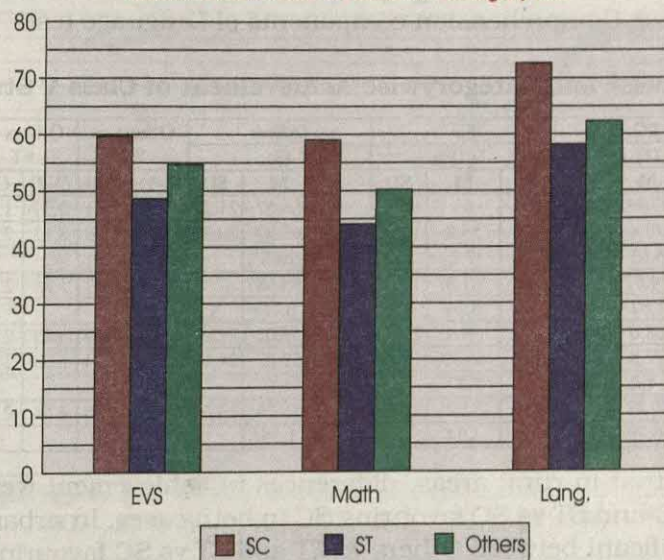
Mathematics

The data reveals that in rural areas, achievement of SC students was significantly better than Others as well as ST students. In urban areas, Other students performed significantly better than ST students. In SC and ST categories, achievement of rural students was significantly better than urban students.

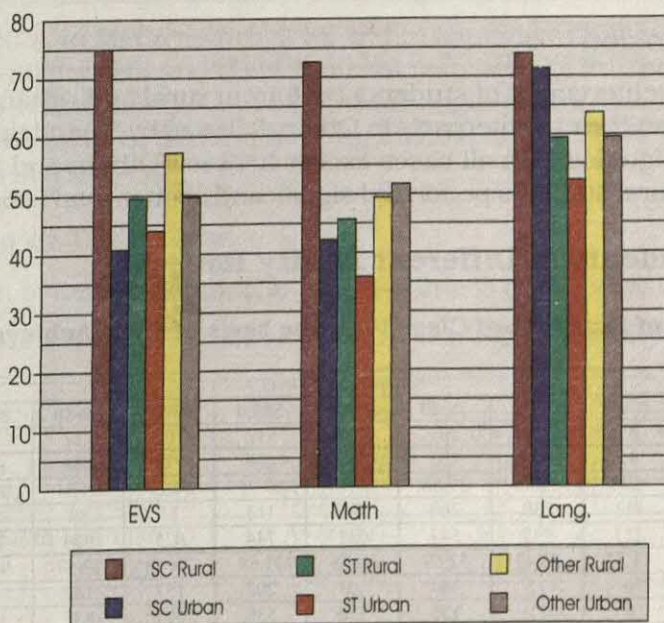
Language

The data reveals that achievement of students, both from rural and urban areas of SC category were better than their counterparts in Others followed by ST category. The

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



categorywise differences were significant in all cases except between Others vs ST in rural areas. In ST category, rural students performed significantly better than their urban students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	31	77.03	16.72	699	63	18.42	95	66.57	21.37	-10.46	-2.81	3.57	1.55	-14.03	-4.55
	Urban	25	70.4	16	140	55.8	13.65	48	63.92	20.37	-6.48	-1.49	8.12	2.57	-14.6	-4.29
	Diff.		6.63			7.2			2.65							
	Total	56	74.07	16.59	839	61.8	17.91	143	65.68	21	-8.39	-2.97	3.88	2.08	-12.27	-5.33
	CR Value		1.51			5.34			0.72							
Reading Comprehension	Rural	31	68.6	20.95	699	53.4	20.71	95	59.02	21.92	-9.58	-2.19	5.62	2.36	-15.2	-3.95
	Urban	25	72.8	14.39	140	46.19	17.84	48	52.22	26.11	-20.58	-4.34	6.03	1.49	-26.61	-8.19
	Diff.		-4.2			7.21			6.8							
	Total	56	70.48	18.28	839	52.2	20.43	143	56.74	23.54	-13.74	-4.38	4.54	2.17	-18.28	-7.19
	CR Value		-0.89			4.24			1.55							

The data reveals that in rural areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In urban areas these differences were significant between Others vs ST and ST vs SC favouring Others and SC respectively. In ST category, rural students performed significantly better than urban students.

Reading Comprehension

The data reveals that achievement of students both from rural and urban areas of SC category were better than their counterparts in Others followed by ST and the differences in achievement were significant in all cases except between Others and ST in urban areas. In ST category, rural students performed significantly better than urban students.

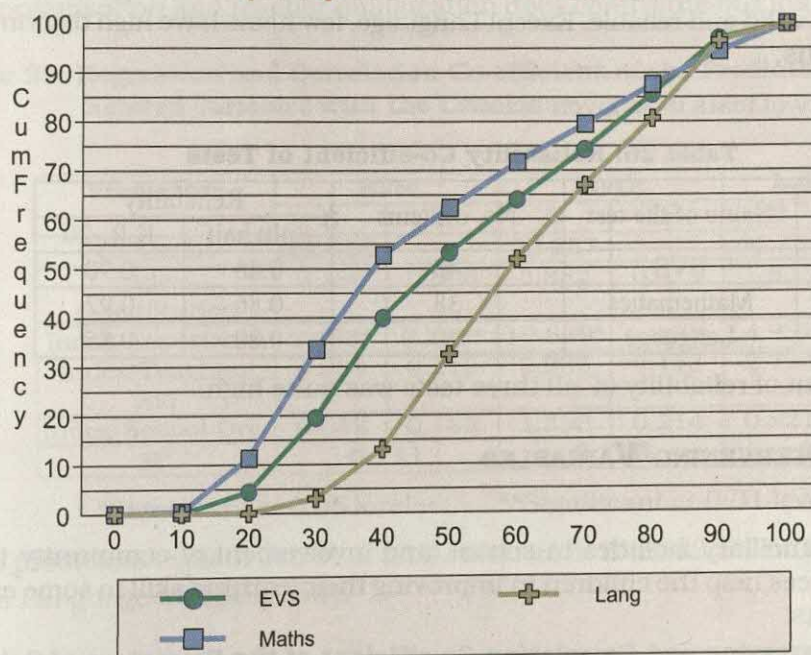
Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	0	45	157	203	147	112	107	117	119	31
	cf	0	45	202	405	552	664	771	888	1007	1038
	cf(%)	0.00	4.33	19.46	39.86	53.18	63.97	74.27	85.54	97.01	100
Math	f	4	113	230	200	84	113	81	84	71	58
	cf	4	117	347	547	631	744	825	909	980	1038
	cf(%)	0.38	11.27	33.42	52.69	62.35	71.68	79.47	87.57	94.41	100
Language	f	0	0	31	104	201	202	157	142	165	36
	cf	0	0	31	135	336	538	695	837	1002	1038
	cf(%)	0	0	2.98	13.00	32.37	51.83	66.95	80.63	96.53	100

The data reveals that in Mathematics, the distribution of scores covered the entire range from 0-100 per cent whereas in EVS and Language, none of the student figured in the range 0-10 per cent and 0-20 per cent respectively. The maximum number of

Frequency Distribution of Students



cases in EVS (203), in Mathematics (230) and in Language (202) were in the range 30-40 per cent, 20-30 per cent and 50-60 per cent respectively. Further, 46.82% students in EVS, 39.21% in Mathematics and 67.63% in Language scored more than 50% marks. Likewise, 36.03% in EVS, 28.32% in Mathematics and 48.17% in Language scored more than 60% marks.

Classification of Test Items

The distribution of items according to facility value is given below:

Table 24: Distribution of Items According to Facility Values

Facility DI	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	0
25 to less than 50	Difficult	19	11	22
50 to less than 75	Average	21	23	24
75 to 100	Very Easy	0	6	0

None of the item is very difficult and most of the items are of average difficulty. The tests do not contain even very easy items in EVS and Math. Few items in Language are also very easy.

Table 25: Distribution of Test Items According to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	6	1	14
.30 to less than .70	Average Discrimination	30	31	21
Less than .30	Poor Discrimination	4	8	3

The few poorly discriminating items are the one which have high facility value i.e., easier one. Three-fourth of the items in EVS and Mathematics have average discrimination, making the tests valid and reliable. Except Language, few items have high discrimination in EVS and Maths.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.86	0.90
2	Mathematics	38	0.86	0.92
3	Language	40	0.80	0.85

The coefficient of reliability of all three tests was quite high.

IMPACT OF INTERVENING VARIABLES

School

Teaching time, ancillary facilities in school, and involvement of community through various committees help the children in improving their learning skill to some extent in the three subjects.

Table 27: Regression and Correlation Co-efficient of the Predictors of School Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	81.891	--	55.471	--	75.302	--
PTR	-0.280	-0.085	-0.193	-0.131	-0.167	-0.011
Com_Participation	6.053*	0.219*	6.362*	0.219	3.984*	0.223**
Teach-aid	0.211	0.024	1.052*	0.108**	0.249	0.063
Physical facility	0.227	0.017	0.035	0.048	0.076	0.063
Ancillary facility	0.259*	0.124	0.507*	0.166*	0.092*	0.021
Instructional time	0.083	0.087*	0.067	0.205	0.162**	0.397**
Working day	0.021	0.470	0.099	0.120	0.017	0.010
Index-Comp. TLM	0.259	0.102	0.564	0.007	-0.061	-0.052
R²	0.195		0.170		0.283	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 19.5% of total variance in Math and, 17.0% in EVS and 28.3% in Language independently.

Teacher

Teaching experience and teachers' training, and teaching aids and teaching style of teachers influence the learning achievement of children in the two subjects EVS and Mathematics. The positive association of teaching experience and teachers' training with the two criteria i.e., EVS and Mathematics indicates that teaching experience at primary stage and in-service teachers' training has helped the children in improving

their learning achievement in these two subjects. Other predictors like teaching aids, school organisation and teacher qualification does contribute but insignificantly.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	52.054	--	39.657	--	54.751	--
Index-Qualification	0.186	0.006	3.882	0.075	1.833	0.064
Index-Experience	9.692*	0.273*	10.849*	0.262*	4.937	0.190
Index-Teaching Aid	4.984	0.210	0.235	0.113	2.793	0.193
Index-School Org.	0.548	0.182	1.298	0.214	0.821	0.220
R²	0.111		0.195		0.089	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 11.1% of total variance in EVS, 19.5% in Mathematics and 8.9% in Language independently.

Pupil

The teaching-learning processes adopted by the teachers in school, age of children, percentage attendance of children in school, educational status and occupation of parents, schooling practices to the children influence the learning achievement of children in three subjects i.e., EVS, Mathematics and Language. The positive association of teaching-learning processes, of children in school, educational status and occupation of parents, schooling practices and academic assistance provided by family members with the three criteria indicates that active involvement of teachers in school and family members at home, educational status and occupation of parents and attending school regularly help the children in their learning achievement in the three subjects. The negative association of age of children with the three criteria indicates that children of higher age group scores poorly and vice-a-versa. This is a universal phenomena. Similarly detention in also negatively association with the achievement in three subjects.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil Related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	82.897	--	88.311	--	72.859	--
Index-Ed & Occu	2.094	0.001	0.527	0.011	0.018	0.016
Index-Schooling	0.411**	0.027	0.385*	0.091**	0.027	0.017
Index-TLP	8.636**	0.119**	6.154**	0.151**	6.334**	0.178**
Age	-3.100**	-0.172	-0.761**	-0.183**	-0.815**	-0.160**
Detention	-2.291**	-0.080**	-0.051	-0.089**	-1.181**	-0.041
Attendance	0.014	0.006	0.180	0.046	0.115**	0.119**
R²	0.084				0.068	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 5.7% of total variance in EVS, 8.4% in Mathematics and 6.8% in Language independently.

One can infer from the above analysis, that the infrastructure facilities of the school and the community participation helped the children in improving their learning achievement in three subjects to some extent. Use of teaching aids and teaching style of teachers helped the children in improving their learning achievement. Schooling practices and providing teaching material also helped the children in improving their learning achievement in the three subjects.

Hard Spot of Learning

In EVS, no item was found very difficult. However, 19 (47%) items were found difficult. The hard spots were identification of natural features of the country, climatic conditions at varying attitudes, boundaries with neighbouring countries, understanding a longitude and a latitude, recognition of first President of India, system of governance in India, knowledge of UN days, knowledge of pre-British rule, farmer's role in freedom struggle, knowledge of solar system, planets etc, understanding of eclipse, knowledge of composition of air, effect of weather conditions of human bodies, knowledge of pollution free fuel, identification of simple machine, effects of force, conservation of wild animals and knowledge of carrier of diseases.

No item was found very difficult in language, however, 11 (27%) items were found difficult. The hard spots were comprehension of instructions, comprehension of informatinal passage and story.

In Mathematics, item No. 26 and 29 were found very difficult and 22 (55%) items were found difficult. The hard spots were in number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

Analysis of the results signified that

- Musical instruments were available in one school.
- Computer was available in very few schools.
- Competency-based teaching aids, workbooks and teachers' Handbooks textbooks were available for very few schools for few classes till the year 2001.
- Maximum students were getting the benefit under Mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 184.
- AEC, SMC and PTA were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil-Teacher Ratio was higher in urban schools than rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Not a single teacher had qualification below Class X.
- More degree holder male teachers studied Mathematics, Science and Social Science than female teachers.
- Approximately, half the teachers had diploma/certificate in primary/elementary education.
- Not a single female teacher was M.Ed degree holder.
- Majority of teaching aids were available to more than 85% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by SCERT.

- Maximum in-service training programmes were conducted on 'Competency-based Teaching-learning'.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 81% teachers have not attended any in-service training programme during last three years.
- In most of cases teachers were getting assistance always from 'Head of Schools'.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- For approximately 62% students, medium of instructions in the school was same as the language spoken at home.
- In general educational qualification of mothers was poorer than fathers.
- Girl students were getting more academic assistance from elder brother/sister than other family members.
- Urban boys and over all boys were getting more academic assistance from father than any other member.
- Approximately, 87% students were attending schools above 70% working days.
- Approximately, less than 3-4% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS and Mathematics, there was significant difference in students' achievement across the categories except Others vs SC in EVS.
- In Language, performance of students of SC was better than Others students.
- In rural areas, performance of SC students was better than Others student followed by students of ST category in all subjects.
- In urban areas, performance of students of Others category was better than SC students in EVS and Math.
- Infrastructure facilities of the school did helped the children in improving their learning achievement in three subjects.
- Use of teching aids and teching style of teachers helped the children in improving their learning achievement.
- Teaching—learning material helped the students in achievement.

INTRODUCTION

The State of Orissa has come into existence in 1936. Since then the Directorate of Public Instructions was looking after the management of education at all levels. Orissa like many other Indian states experienced a massive quantitative expansion in terms of institutional proliferation, increased enrolment, enlarged teaching workforce, etc. Access to Elementary Education is provided through Primary and Upper Primary schools. The Government of Orissa has resolved to achieve universalisation of primary education by 2007 (end of Tenth Five-Year Plan). The number of primary schools has gone up from 6,814 to 42,104, upper primary from 286 to 11,510 in the period (1951 - 2002). The total number of students in primary schools is 37,97,446 and teachers working in primary schools are 95,540 (in 2001-2002).



Almost all primary schools in the state have Classes I to V. All schools function for 6 hours daily, with half an hour recess, for 220 days in an academic year. All students are exposed to Mother tongue, Mathematics, Environment Studies (or Science and Social Science) separately. Besides this, English is also taught from Class II onward. There are total 30 districts in Orissa state.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 200 schools were sampled from Balasore, Khurda, Rayagada and Sambalpur districts of Orissa. Out of total sampled schools, 50 schools were selected from each of the four selected districts.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	161	161	100	0	0	0	0
Urban	39	38	97.44	0	0	1	2.56
Total	200	199	99.50	0	0	1	0.5

Teachers

A total 395 teachers were sampled from 200 sampled schools. Out of 395 teachers, 278 were male teachers and 117 were female teachers. Areawise, 317 teachers were from rural areas and 78 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	31	12.5	28	11.29	92	37.1	97	39.11	248
	Female	8	11.59	1	1.45	23	33.33	37	53.62	69
	Total	39	12.3	29	9.15	115	36.28	134	42.27	317
Urban	Male	2	6.67	1	3.33	13	43.33	14	46.67	30
	Female	0	0	3	6.25	9	18.75	36	75	48
	Total	2	2.56	4	5.13	22	28.21	50	64.1	78
Total	Male	33	11.87	29	10.43	105	37.77	111	39.93	278
	Female	8	6.84	4	3.42	32	27.35	73	62.39	117
	Total	41	10.38	33	8.35	137	34.68	184	46.58	395

Table 2 shows that the percentage of male teachers was higher than female teachers in all categories except Others.

Students

A total number of 2,979 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Balasore	Rural	377	330	707
	Urban	69	56	125
	Total	446	386	832
Khurda	Rural	404	388	792
	Urban	111	113	224
	Total	515	501	1016
Raygada	Rural	175	127	302
	Urban	92	91	183
	Total	267	218	485
Sambalpur	Rural	256	231	487
	Urban	73	86	159
	Total	329	317	646
Total	Rural	1212	1076	2288
	Urban	345	346	691
	Total	1557	1422	2979

Out of 2,979 students, 2,288 students were from rural areas and remaining 691 students were from urban areas. Out of the total sample, 1,557 were boys and 1,422 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	18	11.18	150	93.17	11	6.83	0	0	0	0
Urban	3	7.69	37	94.87	2	5.13	0	0	0	0
Total	21	10.5	187	93.5	13	6.5	0	0	0	0

Table 4 indicates that out of 200 rural sampled schools, 10.5% were attached in pre-school, 93.5% in primary and 6.5% elementary schools.

Facilities related to teaching-learning process

It was observed that maps were available in 95% schools. Globes were available in 90% schools. Children's books, charts and maths kit were available in 72% to 79% schools. Magazines, journals and newspapers were available only in 15% schools. Reference books, dictionaries, encyclopedia and primary science kit were available in 82% schools. Besides, play material and toys, mini tool kit were available in 56% - 58% schools. But game equipments were available in 43% schools.

Infrastructural facilities

It was observed that school bell, blackboard, table and chairs for teachers and chalk and duster were available in 92% and more schools, whereas, water pitcher, ladel and glasses and pin-up board/notice board were available in 56% to 50% schools. Besides, play ground and dustbin were available in 35% and 31% schools respectively. However, musical instruments were available in 25% schools. Further, mat and furniture for students were available only in 6% schools.

Ancillary Facilities

TV, electric connection and separate toilet for girls were available in 18% to 20% schools. Annual medical check-up for children and safe drinking water facilities were available in 67% and 63% schools respectively. Besides, toilet facilities and first-aid kit were available in 30% schools. However, computer facility was not available in any school.

Competency-based Teaching Materials

Information gathered shows that out of 200 schools, competency-based textbooks and teaching aids were available in more schools than workbooks and teachers' handbook. Teachers handbook and workbooks were approximately same, were available in lesser number of schools.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	6332	5950	4729	4849	3543	3327	8043	6950	22647	21076
	%	27.95	28.23	20.88	23.00	15.64	15.78	35.51	32.97	100	100
Free uniform	N	38	14	196	222	0	1	6	3	240	240
	%	15.83	5.83	81.66	92.50	0	0.41	2.50	1.25	100	100
Free textbooks	N	5325	5163	5023	4286	2189	2204	2398	2637	14935	14290
	%	35.65	36.13	33.63	29.99	14.65	14.42	16.05	18.45	100	100
Scholarship for regular attendance	N	33	32	7	7	65	101	14	11	119	151
	%	27.73	21.19	5.88	4.63	54.62	66.88	11.76	7.28	100	100
Other Schemes	N	24	35	43	42	17	9	15	21	99	107
	%	24.24	32.71	43.42	39.25	17.17	8.41	15.15	19.62	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. Boys and girls from Others category were getting maximum benefit from mid-day meal. Whereas boys and girls from ST category were benefited from free uniform and other schemes. SC boys and girls were maximum benefited from free textbooks.

Instructional Time

The number of working days in schools were 220 days on an average, schools were having 7 periods in a day of approximately of 42 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 200 rural schools, 179(89.5%) schools were having Village Education Committees (VEC). The percentage of Village Education Committees, Parent-Teacher Association and School-Management Committees were found more in urban schools than rural schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	143	36	179
	%	88.82	92.31	89.5
AEC	N	0	0	0
	%	0	0	0
SMC	N	80	22	102
	%	49.69	56.41	51
PTA	N	140	36	176
	%	86.96	92.31	88

TEACHERS PROFILE

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	161	335	68.93	151	31.07	486	3	43
Urban	39	51	28.98	125	71.02	176	5	44
Total	200	386	58.31	276	41.69	662	3	43

Table 7 shows that overall the number of female teachers was more than male teachers. The average number of teachers per school in rural and urban areas was 3 and 5 respectively. Further, average pupil-teacher ratio was 43:1, however, this ratio was 44:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. The trend was same for teachers holding graduation degree. Further, percentage of female teachers who studied upto sr. secondary level was higher than their counterparts. However, male teacher who had passed Class X certificate was more than female teachers. Besides, only 2-4% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	10	3.6	126	45.32	49	17.63	64	23.02	29	10.43	278
Female	2	1.71	35	29.91	27	23.08	36	30.77	17	14.53	117
Total	12	3.04	161	40.76	76	19.24	100	25.32	46	11.65	395

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	12	4.32	221	79.5	34	12.23	11	3.96	278
	Female	5	4.27	104	88.89	5	4.27	3	2.56	117
	Total	17	4.3	325	82.28	39	9.87	14	3.54	395
Science	Male	11	3.96	229	82.37	29	10.43	9	3.24	278
	Female	3	2.56	104	88.89	8	6.84	2	1.71	117
	Total	14	3.54	333	84.3	37	9.37	11	2.78	395
Language (Medium)	Male	11	3.96	138	49.64	55	19.78	74	26.62	278
	Female	2	1.71	44	37.61	31	26.5	40	34.19	117
	Total	13	3.29	182	46.08	86	21.77	114	28.86	395
Social Science	Male	12	4.32	206	74.1	29	10.43	31	11.15	278
	Female	4	3.42	72	61.54	19	16.24	22	18.8	117
	Total	16	4.05	278	70.38	48	12.15	53	13.42	395

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. However, this was reverse in case of Language and Social Science. Similar trend was observed at higher secondary level. This trend was reverse at secondary level. Besides, the percentage of male teachers who studied Mathematics, Language, Science and Social Science below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualification is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
200	Male	219	46	9
	Female	94	26	5
	Total	313	72	14

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few male teachers were having M.Ed degree. Besides, approximately, 1/5th teachers had B.Ed. degree.

Availability of Teaching Aids

Information collected reveals that all teaching aids were available to more than 85% teachers in urban schools and 88% teachers in rural schools. Science and Mathematic kits were available to less teachers.

In-service Training

The account of in-service training programmes 'organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
School Complex	N	6
	%	1.51
Block Resource Centre	N	135
	%	34.17
Teacher Resource Centre	N	19
	%	4.81
Cluster Resource Centre	N	22
	%	6.56
DIET	N	100
	%	25.31
SCERT	N	35
	%	8.86
Others	N	17
	%	4.30

The in-service training programme were organised in the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Maximum teachers attended the training programme conducted by the DIET, SCERT, CRC and BRC.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	5
Content Enrichment	0
Production of Instructional Material	1
Use of Instructional Material	0
Assessment of Pupil Learning	0
Competency based Teaching Learning	2
Activity based Joyful Learning	0
Others	8

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Activity based Joyful Learning', followed by 'Competency based Teaching-Learning and by 'Content Enrichment'. Minimum programmes were conducted on 'Assessment of Pupil Learning'.

Out of 395 sampled teachers, 27.34% teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was approximately 27% and 29% respectively. This was also true for both urban and rural areas teachers.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	159	163	147	149
	%	55.40	56.79	51.22	51.92
Average	N	122	112	126	129
	%	42.50	39.02	43.90	44.95
Low	N	6	12	14	9
	%	2.09	4.18	4.88	3.14

It is evident that approximately 43% training programmes were average effective in terms of utility of knowledge gained during training programmes. However 55% programmes were considered as 'highly' useful. The impact of these training programmes was rated as average by 39% to 45% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'high' by 51% to 57% teachers.

Academic assistance received from various Sources

Data collected indicates that teachers both in rural and urban areas were getting maximum academic assistance from 'Head of the School' followed by 'Other teachers of the School'. Sometimes they were getting academic assistance from other sources.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 84% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	68	2.28	53	1.78
Illiterate	400	13.43	894	30.01
Literate	234	7.85	290	9.73
Primary	656	22.02	713	23.93
Secondary	974	32.70	660	22.15
Sr. Secondary	152	5.10	70	2.35
Degree and above	151	5.07	49	1.64
Donot Know/Cannot say	344	11.55	250	08.39

Table 14 indicates that approximately 13% fathers and 30% mothers of the students were illiterate. Only 5% fathers and 2% mothers were having degree or higher educational qualifications. Further, half of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than fathers.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	60	32	92	19	8	27
Household/ Housewife	13	2	15	2029	602	2631
Farmer	1018	82	1100	48	4	52
Poultry farming	4	0	4	2	0	2
Agricultural labour	264	29	293	90	6	96
Picking forest produce	8	1	9	12	3	15
Domestic Servent	10	16	26	2	8	10
Street Vender	36	17	53	4	10	14
Manual unskilled worker	126	55	181	20	8	28
Skilled worker	229	102	331	17	9	26
Clerical worker	39	51	90	3	8	11
Shopkeeper	147	118	265	2	10	12
Employer	78	39	117	1	2	3
Manager/Senior Officer	149	65	214	26	6	32
Others	107	82	189	13	7	20

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas, majority of mothers were housewives and fathers were shopkeepers. Only few mothers and approximately 1/10th fathers were Manager/Senior Officers. In decreasing order, fathers were working as farmer, skilled worker, agricultural labour, shopkeeper, manager/senior officer, manual unskilled worker and employer. In decreasing order mothers were doing household/housewives, agricultural labour, farmer, manager/senior officer, manual unskilled worker, skilled worker and picking forest produces.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	517	498	171	172	688	670
	%	42.66	46.28	49.57	49.71	44.19	47.12
Mother	N	331	300	121	116	452	416
	%	27.31	27.88	35.07	33.53	29.03	29.25
Elder Brother/Sister	N	486	450	138	155	624	605
	%	40.1	41.82	40	44.8	40.08	42.55
Others	N	98	116	26	26	124	142
	%	8.09	10.78	7.54	7.51	7.96	9.99

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. However, girls were getting more academic assistance from father than boys. The descending order of academic assistance provided by the family members was father, elder brother and sister and mother.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending schools between 90-100% of working days was almost same. It was different for rural and urban areas. The similar picture is observed for students' attending school between 80-90% of working days. Only 3% percent boys and girls were attending schools less than 60% of total working days. Approximately, 83% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

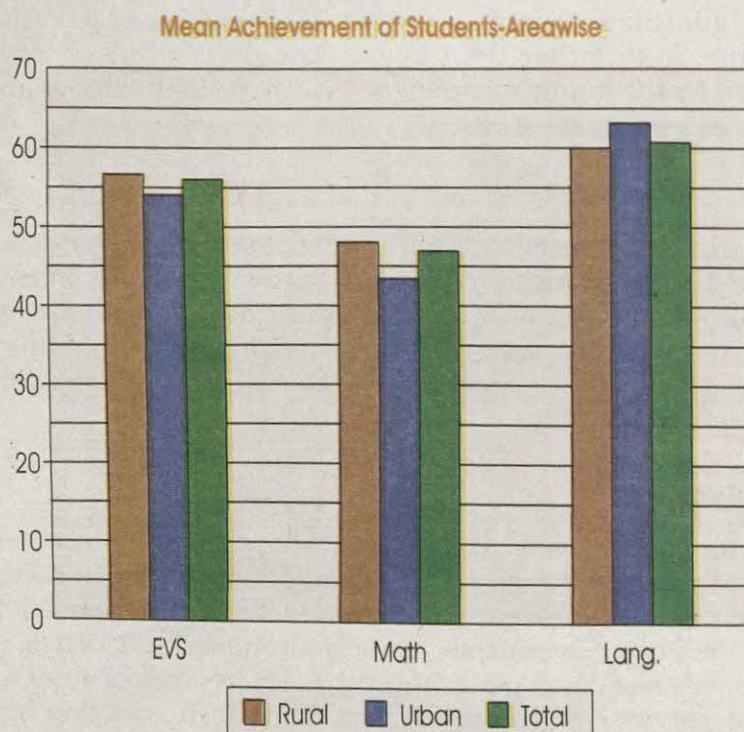
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Orissa. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

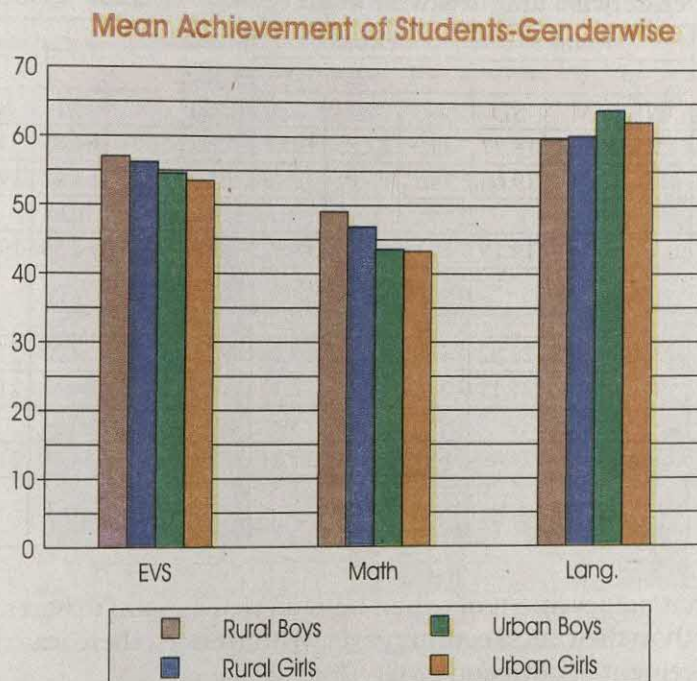
Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1212	57.03	19.06	345	54.57	19.12	-2.46	1557	56.48	19.09	-2.11
	Girls	1076	56.17	19.7	346	53.53	18.93	-2.64	1422	55.52	19.54	-2.23
	Diff.		0.86			1.04				0.96		
	Total	2288	56.62	19.36	691	54.04	19.02	-2.58	2979	56.03	19.31	-3.11
	CR Value		1.06			0.72				1.35		
Mathe- matics	Boys	1212	49.08	20.89	345	43.54	19.38	-5.54	1557	47.85	20.69	-4.6
	Girls	1076	46.83	20.72	346	43.29	20.8	-3.54	1422	45.97	20.79	-2.76
	Diff.		2.25			0.25				1.88		
	Total	2288	48.02	20.83	691	43.42	20.09	-4.6	2979	46.95	20.75	-5.23
	CR Value		2.58			0.16				2.47		
Langu- age	Boys	1212	59.83	17.74	345	63.99	17.69	4.16	1557	60.75	17.81	3.85
	Girls	1076	60.2	18.28	346	62.27	17.01	2.07	1422	60.7	17.99	1.93
	Diff.		-0.37			1.72				0.05		
	Total	2288	60	17.99	691	63.13	17.36	3.13	2979	60.73	17.89	4.12
	CR Value		-0.49			1.3				0.08		





Environmental Studies

The data given in Table 17 reveals that achievement of students, both boys and girls, of rural areas was significantly better than their counterparts in urban areas. Within areas, there was no significant difference in achievement of boys and girls.

Mathematics

The data reveals that achievement of boys was significantly better than girls. Further, the achievement of students, both boys and girls of rural areas was significantly better than their counterparts in urban areas. In rural areas, boys performed significantly better than girls.

Language

The data reveals that achievement of urban boys as well as total urban students was significantly better than their counterparts in rural areas. Within areas, there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Student

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram-mar & Usage	Boys	1212	63.74	18.77	345	67.85	19.47	4.11	1557	64.65	19	3.49
	Girls	1076	63.9	19.66	346	66.01	18.13	2.11	1422	64.41	19.31	1.84
	Diff.		-0.16			1.84				0.24		
	Total	2288	63.81	19.19	691	66.93	18.82	3.12	2979	64.53	19.15	3.8
	CR Value		-0.2			1.29				0.34		
Compre-hension	Boys	1212	53.33	21.82	345	57.57	20.26	4.24	1557	54.27	21.55	3.37
	Girls	1076	54.03	21.11	346	56.03	22.12	2	1422	54.51	21.37	1.48
	Diff.		-0.7			1.54				-0.24		
	Total	2288	53.66	21.49	691	56.8	21.21	3.14	2979	54.39	21.46	3.4
	CR Value		-0.78			0.95				-0.3		

The data reveals that achievement of urban boys as well as total urban students was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement of boys and girls.

Reading Comprehension

The data reveals that achievement of urban boys as well as total urban students was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement of boys and girls.

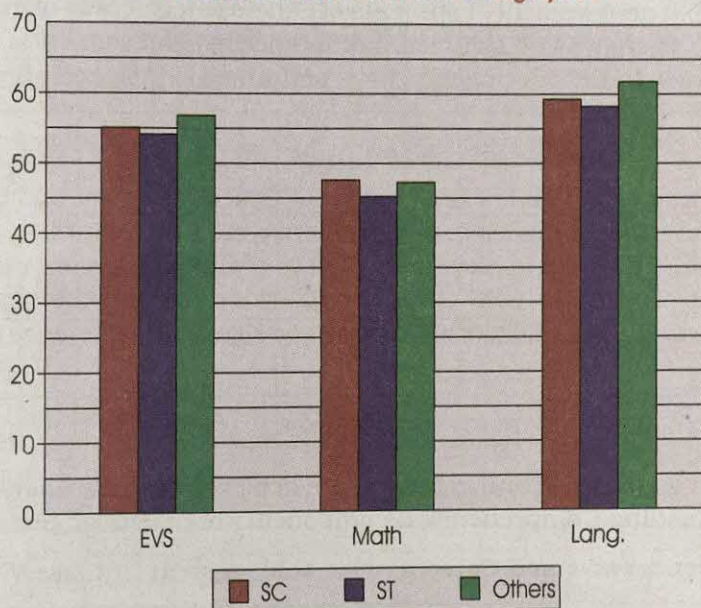
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

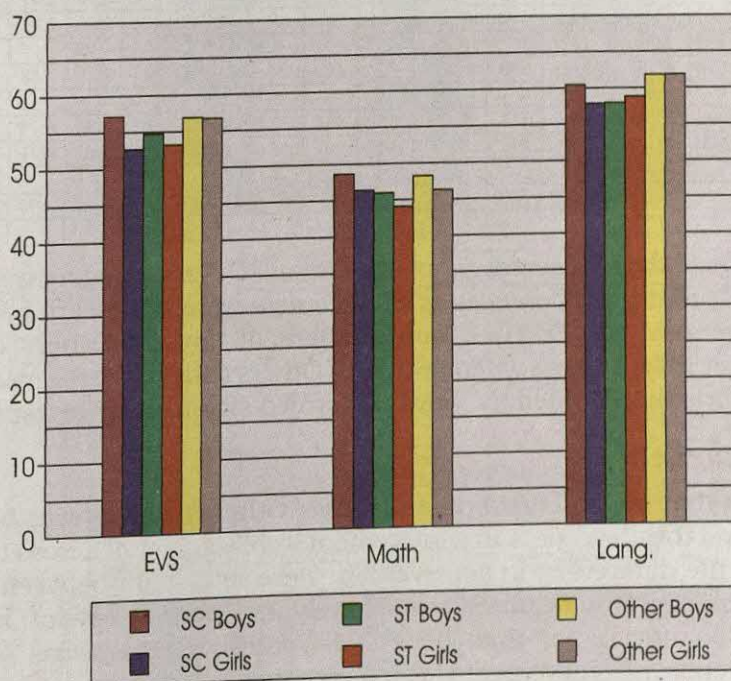
Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	285	57.13	21.04	318	54.74	19.21	954	56.87	18.42	-0.26	-0.19	2.13	1.73	-2.39	-1.45
	Girls	243	52.65	21.74	212	53.18	18.45	967	56.76	19.08	4.11	2.7	3.58	2.54	0.53	0.28
	Diff.		4.48			1.56			0.11							
	Total	528	55.07	21.46	530	54.12	18.91	1921	56.81	18.75	1.74	1.69	2.69	2.9	-0.95	-0.76
	CR Value		2.40			0.94			0.13							
Mathe-matics	Boys	285	48.63	23.86	318	45.99	19.75	954	48.24	19.95	-0.39	-0.25	2.25	1.75	-2.64	-1.47
	Girls	243	46.38	23.59	212	44.05	17.68	967	46.28	20.66	-0.1	-0.06	2.23	1.61	-2.33	-1.2
	Diff.		2.25			1.94			1.96							
	Total	528	47.6	23.74	530	45.22	18.95	1921	47.25	20.33	-0.35	-0.31	2.03	2.15	-2.38	-1.8
	CR Value		1.09			1.19			2.12							
Language	Boys	285	60.44	18.33	318	57.93	17.7	954	61.79	17.6	1.35	1.1	3.86	3.37	-2.51	-1.71
	Girls	243	57.86	18.36	212	58.81	15.45	967	61.83	18.32	3.97	3.01	3.02	2.49	0.95	0.6
	Diff.		2.58			-0.88			-0.04							
	Total	528	59.25	18.37	530	58.28	16.82	1921	61.81	17.96	2.56	2.85	3.53	4.21	-0.97	-0.9
	CR Value		1.61			-0.61			-0.05							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that achievement of students of Others category was significantly better than ST students. In case of girls, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. In SC category, boys performed significantly better than girls.

Mathematics

The data reveals that achievement of students of Others category was significantly better than ST students. There was no significant difference in achievement of boys and girls across the categories. In Others category, boys performed significantly better than girls.

Language

The data reveals that achievement of students of Others category was better than SC followed by ST and the differences in achievement were significant between Others vs SC and Others vs ST. Further, achievement of boys of Others category was significantly better than ST boys whereas girls of Others category performed significantly better than SC and ST girls. Within categories, there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	285	64.35	19.64	318	62.86	18.87	954	65.33	18.83	0.98	0.75	2.47	2.02	-1.49	-0.95
	Girls	243	60.89	19.11	212	62.77	17.23	967	65.65	19.67	4.76	3.45	2.88	2.15	1.88	1.1
	Diff.		3.46			0.09			-0.32							
	Total	528	62.76	19.46	530	62.82	18.21	1921	65.5	19.25	2.74	2.87	2.68	2.96	0.06	0.05
	CR Value		2.05			0.06			-0.37							
Reading Comprehension	Boys	285	53.92	21.81	318	49.73	20.95	954	55.88	21.47	1.96	1.34	6.15	4.51	-4.19	-2.4
	Girls	243	52.81	23	212	52.2	18.09	967	55.45	21.57	2.64	1.62	3.25	2.28	-0.61	-0.32
	Diff.		1.11			-2.47			0.43							
	Total	528	53.41	22.35	530	50.72	19.88	1921	55.67	21.52	2.26	2.07	4.95	4.98	-2.69	-2.07
	CR Value		0.57			-1.45			0.44							

The data reveals that achievement of students of Others category was better than SC followed by ST and the differences in achievement were significant between Others vs SC and Others vs ST. Further, achievement of boys of Others category was significantly better than ST boys whereas girls of Others category performed significantly better than SC girls. In SC category, boys performed significantly better than girls.

Reading Comprehension

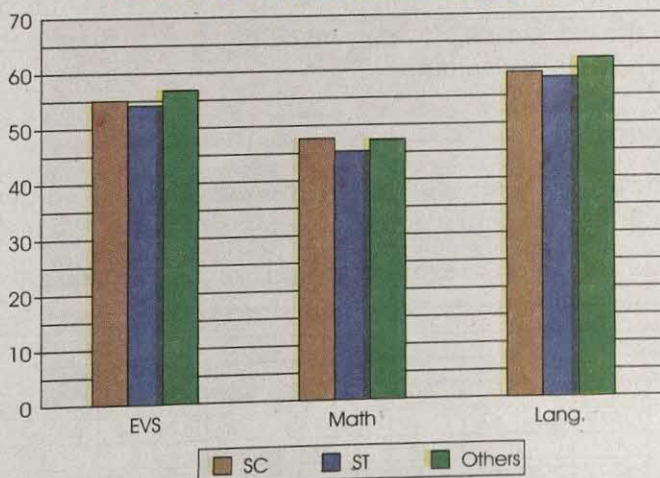
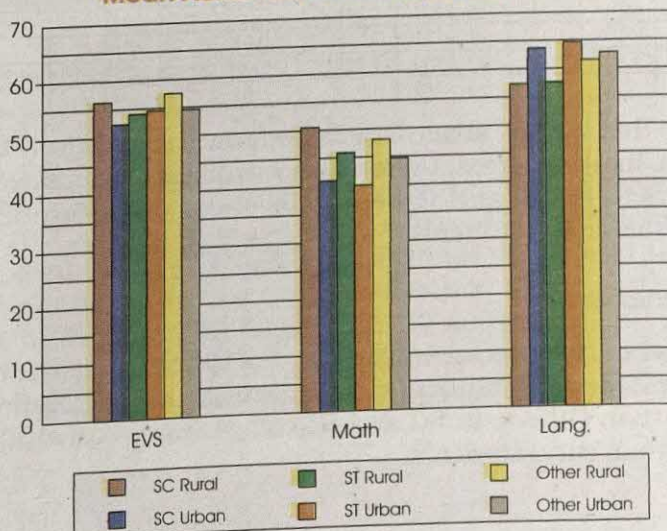
The data reveals that achievement of students of Others category was better than SC followed by ST and the differences in achievement were significant across the categories. In case of boys, the differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. Further, the boys of Others category performed significantly better than boys of ST category. There was no genderwise significant difference in achievement within categories.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	367	56.29	22.2	473	54.06	18.45	1448	57.54	18.81	1.25	0.99	3.48	3.54	-2.23	-1.55
	Urban	161	52.3	19.47	57	54.56	22.55	473	54.58	18.4	2.28	1.3	0.02	0.01	2.26	0.67
	Diff.		3.99			-0.5			2.96							
	Total	528	55.07	21.46	530	54.12	18.91	1921	56.81	18.75	1.74	1.69	2.69	2.9	-0.95	-0.76
	CR Value		2.06			-0.16			3.02							
Mathematics	Rural	367	50.54	25.01	473	45.84	19.16	1448	48.09	20.12	-2.45	-1.74	2.25	2.19	-4.7	-2.98
	Urban	161	40.9	19	57	40.03	16.42	473	44.68	20.75	3.78	2.13	4.65	1.96	-0.87	-0.33
	Diff.		9.64			5.81			3.41							
	Total	528	47.6	23.74	530	45.22	18.95	1921	47.25	20.33	-0.35	-0.31	2.03	2.15	-2.38	-1.8
	CR Value		0.26			2.48			3.13							
Language	Rural	367	57.34	18.25	473	57.52	16.52	1448	61.49	18.23	4.15	3.89	3.97	4.42	0.18	0.15
	Urban	161	63.62	17.96	57	64.65	18.07	473	62.78	17.1	-0.84	-0.52	-1.87	-0.74	1.03	0.37
	Diff.		-6.28			-7.13			-1.29							
	Total	528	59.25	18.37	530	58.28	16.82	1921	61.81	17.96	2.56	2.85	3.53	4.21	-0.97	-0.9
	CR Value		-0.26			-2.84			-1.40							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Areawise**

Environmental Studies

The data reveals that in rural areas, achievement of Others category was significantly better than ST students. There was no significant difference in achievement of urban areas across the categories. In SC and Others categories, rural students performed significantly better than urban students.

Mathematics

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, differences in achievement were significant in case of Others vs SC and Others vs ST favouring Others in both cases. In ST and Others category, rural students performed significantly better than urban students.

Language

The data reveals that in rural areas, Others category performed significantly better than both SC and ST students. In urban areas, there was no significant difference in achievement across the categories. However, in ST category, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	367	61.51	18.86	473	62	18.04	1448	64.99	19.55	3.48	3.13	2.99	3.06	0.49	0.38
	Urban	161	65.59	20.54	57	69.68	18.36	473	67.05	18.25	1.46	0.8	-2.63	-1.02	4.09	1.4
	Diff.		-4.08			-7.68			-2.06							
	Total	528	62.76	19.46	530	62.82	18.21	1921	65.5	19.25	2.74	2.87	2.68	2.96	0.06	0.05
	CR Value		-0.09			-2.99			-2.09							
Reading Comprehension	Rural	367	50.37	22.85	473	50.05	19.49	1448	55.67	21.52	5.3	4.02	5.62	5.3	-0.32	-0.21
	Urban	161	60.33	19.52	57	56.26	22.29	473	55.66	21.54	-4.67	-2.55	-0.6	-0.19	-4.07	-1.22
	Diff.		-9.96			-6.21			0.01							
	Total	528	53.41	22.35	530	50.72	19.88	1921	55.67	21.52	2.26	2.07	4.95	4.98	-2.69	-2.07
	CR Value		-5.12			-2.01			0.01							

The data reveals that in rural areas, Others performed significantly better than both SC and ST students. In urban areas, there was no significant difference in achievement across the categories. In ST and Others categories, urban students performed significantly better than rural students.

Reading Comprehension

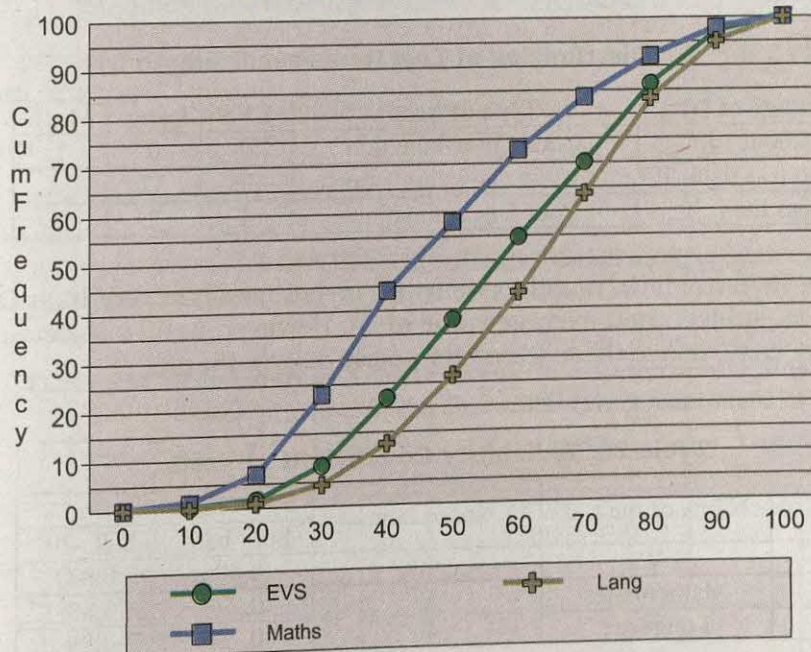
The data reveals that in rural areas, achievement of Others category was significantly better than both SC and ST students. In urban areas, SC students performed significantly better than Others. In SC and ST categories, urban students performed significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	8	39	201	407	475	501	458	480	322	88
	cf	8	47	248	655	1130	1631	2089	2569	2891	2979
	cf(%)	0.27	1.58	8.32	21.99	37.93	54.75	70.12	86.24	97.05	100
Math	f	37	167	479	631	416	437	323	251	172	66
	cf	37	204	683	1314	1730	2167	2490	2741	2913	2979
	cf(%)	1.24	6.85	22.93	44.11	58.07	72.74	83.59	92.01	97.78	100
Language	f	2	24	105	245	412	503	604	585	350	149
	cf	2	26	131	376	788	1291	1895	2480	2830	2979
	cf(%)	0.07	0.87	4.40	12.62	26.45	43.34	63.61	83.25	95.00	100

Frequency Distribution of Students



The figures posted in Table 23 reveal that the distribution of scores covered the entire range from 0-100 percent in all the three subjects. The minimum number of cases in EVS (8), in Mathematics (37) and in Language (2) were in the range 0-10 percent. The maximum number of cases in EVS (501), in Mathematics (631) and in Language (604) were in the range 50-60 percent, 30-40 percent and 60-70 percent respectively. The 62.07% in EVS, 41.93% in Mathematics and 73.55% in Language scored more than 50% marks whereas 45.25% in EVS, 27.26% in Mathematics and 56.66% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	2
25 to less than 50	Difficult	12	10	23
50 to less than 75	Average	28	23	12
75 to 100	Very Easy	0	7	1

Except 2 items in Math, no other items in any subject is very difficult. About 25% items in EVS and Language and 65% items in Mathematics were difficult. However, 70% items in EVS, 57% items in Language and 30% items in Mathematics belonged to the category of average.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
1.00 to .70	Good Discrimination	0	0	1
.30 to less than .70	Average Discrimination	36	37	35
Less than .30	Poor Discrimination	4	3	2

Except one item in Math, no other items in any subject had very high DI. About 90% items in all subject, had average value of DI. However, in all subjects about 7% items were very easy, hence these were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.80	0.87
2	Mathematics	38	0.77	0.88
3	Language	40	0.73	0.85

The split half reliability co-efficient value of three subjects i.e., EVS, Mathematics and Language 0.80, 0.77 and 0.73, respectively have shown the tests are adequately reliable.

IMPACT OF INTERVENING VARIABLES School

Mainly availability of competency-based teaching-learning material contributes towards learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of the material with the three criterions indicates that availability of competency-based material helps the children in improving their learning achievement in three subjects i.e., EVS, Mathematics and Language. Use of teaching aids like teacher's guides, dictionary, reference books, maps, globes, charts, science and science kits, also help the children in understanding the various concepts in EVS.

Table 27: Regression and Correlation Co-efficients of Predictors of School related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	67.577	--	30.072	--	55.097	--
PTR	-0.084	-0.083	-0.038	-0.017	-0.064	-0.097
Com_Participation	0.096	0.076	0.078	0.021	0.499	0.001
Teach-aid	0.173*	0.013*	1.006*	0.041*	0.070	0.060
Physical facility	0.179	0.039	0.813	0.067	0.079	0.002
Ancillary facility	0.091	0.015	0.594	0.084	1.302*	0.133*
Instructional time	0.078	0.008	0.082	0.015	0.015	0.024
Working day	0.011	0.007	0.064	0.030	0.022	0.024
Index-Comp. TLM	6.227**	0.163*	0.065**	0.201**	4.394**	0.155*
R²	0.074		0.066		0.085	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 7.4% of total variance in EVS, 6.6% in Mathematics and 8.5% in Language.

Teacher

By and large, the teaching experience of teachers, their qualification, teaching aids and teaching style of teachers and school organisation do not seem to influence towards learning achievement of children in Environmental Sciences and Mathematics. However, teacher qualification and school organization has some impact on learning achievement of children in Language.

Table 28: Regression and Correlation Co-efficients of Predictors of Teacher related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	55.791	--	49.659	--	65.522	--
Index-Qualification	0.517	0.024	0.966	0.013	0.156*	0.002*
Index-Experience	0.292	0.002	1.208	0.048	1.607	0.076
Index-Teaching Aid	0.685	0.054	0.585	0.042	0.031	0.013
Index-School Org.	0.132	0.013	0.172	0.032	0.502*	0.117*
R²	0.004		0.005		0.021	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 2.1% of total variance in Language.

Pupil

The percentage attendance of students in school, teaching-learning processes adopted by the teachers in school and school practices, and academic assistance provided by the family members to the children, and age of children and educational status and occupation of parents influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of the percentage attendance of students in school, teaching-learning processes adopted by the teachers in school, school practices with the three criteria indicates that active involvement of teachers in school and parents at home help the children in improving their learning

achievement in EVS, Mathematics and Language.

Table 29: Regression and Correlation Co-efficients of Predictors of Pupil related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	24.916	--	16.168	--	41.269	--
Index-Ed & Occu	1.461*	0.088**	1.138*	0.080**	3.989**	0.171**
Index-Schooling	0.867	0.091**	0.058*	0.094**	0.150*	0.102**
Index-TLP	2.724**	0.096**	3.194**	0.105**	2.499	0.094**
Age	-0.308**	-0.018*	-0.115*	-0.006	-0.694*	-0.020
Detention	-0.77**	-0.020*	-0.879	-0.039	-0.705**	-0.046*
Attendance	0.224**	0.162**	0.241**	0.163	0.158*	0.143**
R²	0.041		0.042		0.050	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 4.1% of total variance in EVS, 4.2% in Mathematics and 5.0% in Language.

One can infer that active involvement of teachers in schools, good schooling, percentage attendance of students in school, availability of competency-based handbook in schools have helped the children in improving the learning achievement in three subjects i.e. EVS, Mathematics and Language.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Orissa out of 4 districts, Rayagarh and Sambalpur are two DPEP districts. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	596	54.61	18.8	961	57.64	19.19	3.07
	Girls	535	53.02	19.57	887	57.03	19.37	3.76
	Diff.		1.59			0.61		
	Total	1131	53.86	19.18	1848	57.35	19.28	4.81
	CR Value		1.39			0.68		
Mathe- matics	Boys	596	45.85	20.02	961	49.09	21.01	3.05
	Girls	535	44.71	20.54	887	46.72	20.91	1.78
	Diff.		1.14			2.37		
	Total	1131	45.31	20.26	1848	47.96	20.99	3.42
	CR Value		0.94			2.43		
Language	Boys	596	61.67	17.35	961	60.19	18.07	-1.61
	Girls	535	60.82	16.52	887	60.63	18.84	-0.2
	Diff.		0.85			-0.44		
	Total	1131	61.27	16.96	1848	60.4	18.44	-1.31
	CR Value		0.84			-0.51		

The data reveals that in EVS and Mathematics, the achievement of students of non-DPEP districts was significantly better than students of DPEP districts. In Language, there was no significant difference in achievement between DPEP and non-DPEP districts student.

Hard Spot of Learning

In EVS, no item was found very difficult and 12 (60%) items were found difficult. The hard spots were identification of natural features of the country, boundaries with neighbouring countries, understanding a longitude and a latitude, representative of a President in a state, judicial functions of courts, recognition of first President of India, knowledge of postal services, identification of a leader of freedom struggle, knowledge of solar system, planets etc., understanding of eclipse, knowledge of pollution free fuel and conservation of wild animals.

No item was found very difficult in Language, however, 10 (25%) items were found difficult. The hard spots question on were comprehension of instructions, comprehension of informatinal passage and story.

In Mathematics, items No. 23 and 29 were found very difficult and 22 (56%) items were found difficult. The hard sports were in number system, commercial mathematics, fractions, decimals, measurement/area and geometry.

FINDINGS

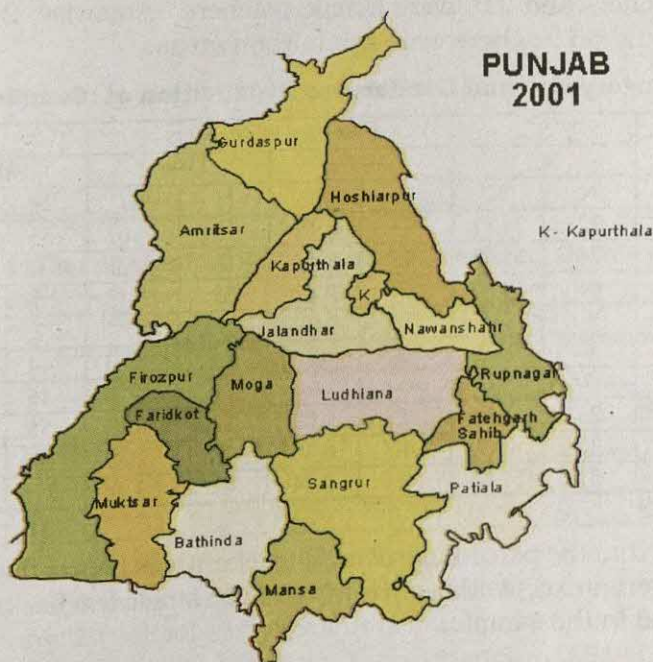
Analysis of the results signified that

- Musical instruments were available in approximately 1/4th schools. Computer facility was not available in any school.
- More students were getting the benefit under mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 220.
- The percentage of VEC, AEC, SMC and PTA were more in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil-teacher ratio was nearly same both in urban and rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Very few teachers were having educational qualification below Class X level.
- More degree holder male teachers studied Mathematics, and Science than female teachers. This was reverse for Language and Social Science.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Most of the teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted on 'Competency-based Teaching-learning, and minimum on 'Assessment of Pupil Learning' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by half of total teachers.
- Approximately, 27% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Majority of fathers were skilled worker and mothers were housewives in urban areas.
- In most cases, teachers were getting maximum assistance from 'Head of Schools'.
- For approximately 84% students, medium of instructions in the school was same as the language spoken at home.
- Percentage of mothers having educational qualification degree or higher educationa was less than fathers. In general, educational qualification of mothers was poorer than fathers.

- Students were getting more academic assistance from fathers/guardian than other family members. Rural girls were getting more academic assistance from father than others.
- Approximately, 88% students were attending schools above 70% working days and approximately less than 4% students were attending schools below 60% of the total working days.
- Achievement of rural students was significantly better than urban students in EVS and Mathematics only. No difference in achievement was there within urban areas.
- Performance of urban students was significantly better than rural students in Language.
- In EVS and Mathematics, there was significant difference in students' achievement between Others vs ST only.
- In Language, performance of students of Others category was better than SC and ST students.
- Active involvement of teachers in school and family members at home, attending school regularly by students and availability of competency-based handbook in schools help the children in improving their learning achievement in the three subjects.
- Parents education level does not help students achievement in all the three subjects.

INTRODUCTION

The state of Punjab since its inception has experienced a large number of changes in its size, social fabric and economy. These changes have, in fact, affected every sphere of life of the people of Punjab. The state has a literacy rate of 69.95%, whereas for male it is 75.63% and 63.55% for female. There are 12,688 primary schools in the state of Punjab for the imparting free and compulsory education to all the children of age group 6-11 years under the Article 45.



Pupil-teacher ratio is 40:1, but the class size in urban and rural areas varies from 40 – 90 students. It varies from school to school. Gross Enrolment Ratio is 87 girls per 100 boys. There are 17 districts in the state.

SAMPLE

The information collected from sampled schools, teachers and students through various tools is presented as under:

Schools

A total of 185 schools were sampled from Amritsar, Hoshiarpur, Ludhiana and Sangrur districts of Punjab. Out of total sampled schools, 49 schools were from Amritsar, 47 from Hoshiarpur, 44 from Ludhiana and remaining 45 from Sangrur.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	147	147	100	0	0	0	0
Urban	38	38	100	0	0	0	0
Total	185	185	100	0	0	0	0

Teachers

A total of 311 teachers were sampled from 185 sampled schools. Out of 311 teachers, 92 were male teachers and 219 were female teachers. Areawise, 245 teachers were from rural areas and 66 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	22	24.72	1	1.12	13	14.61	53	59.55	89
	Female	24	15.38	1	0.64	15	9.62	116	74.36	156
	Total	46	18.78	2	0.82	28	11.43	169	68.98	245
Urban	Male	1	33.33	0	0	0	0	2	66.67	3
	Female	6	9.52	0	0	13	20.63	44	69.84	63
	Total	7	10.61	0	0	13	19.7	46	69.7	66
Total	Male	23	25	1	1.09	13	14.13	55	59.78	92
	Female	30	13.7	1	0.46	28	12.79	160	73.06	219
	Total	53	17.04	2	0.64	41	13.18	215	69.13	311

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except others. However, not a single teacher of ST category from urban area figured in the sample.

Students

A total number of 3,143 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Amritsar	Rural	354	357	711
	Urban	88	104	192
	Total	442	461	903
Hoshiarpur	Rural	198	189	387
	Urban	86	95	181
	Total	284	284	568
Ludhiana	Rural	317	291	608
	Urban	105	86	191
	Total	422	377	799
Sangrur	Rural	383	355	738
	Urban	58	77	135
	Total	441	432	873
Total	Rural	1252	1192	2444
	Urban	337	362	699
	Total	1589	1554	3143

Out of 3,143 students, 2,444 students were from rural areas and remaining 699 students were from urban areas. Out of the total sample, 1,589 were boys and 1,554 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	22	14.97	146	99.32	1	0.68	0	0	0	0
Urban	4	10.53	38	100	0	0	0	0	0	0
Total	26	14.05	184	99.46	1	0.54	0	0	0	0

Table 4 indicates that out of 147 rural sampled schools, pre-primary classes were attached with only 22 schools, whereas in urban areas, out of 38 sampled schools, it was attached with 4 schools. Further, approximately 100% schools in urban areas and 99% schools in rural areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately less than 1% from rural areas.

Facilities related to teaching-learning process

It was observed that maps, globes and charts were available in 54% to 58% schools. Magazines, journals and newspaper were available only in 10% schools. Reference books, dictionaries, encyclopedia, were available in 35% schools. Primary Science kit and maths kit were available in 84% to 87% schools. Besides, mini tool kit game equipment and play material and toys were available in 45% to 48% schools. However, children's books were available in 69% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs for teachers and chalk and duster were available in 82% to 87% schools, whereas, tables for teachers were available in 79% schools. Besides, play ground, dust-bin, water pitcher, ladel and glasses and musical instruments for students were available in 51% to 57% schools. However, pin-up board/notice board were available in only 24% schools.

Ancillary Facilities

Computer and TV were available in only 1% schools. Annual medical check-up for children and toilet facilities were available in 57% and 55% schools respectively. Besides, separate toilet for girls and immunisation facility were available in 29% and 32% schools respectively. Electric connection were available in 61% schools. However, safe drinking water facility were available in 82% schools. But first-aid facility was available in only 15% schools.

Competency-based Teaching Materials

Information gathered shows that out of 185 schools, competency-based textbooks were available in more schools than workbooks, teachers' handbook were available in lesser number of schools as compared with remaining. However, workbooks and teaching aids were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	5888	5096	9	12	1565	1264	2465	1859	9927	8231
	%	59.31	61.91	0.09	0.14	15.76	15.35	24.83	22.58	100	100
Free uniform	N	0	0	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0	0	0
Free textbooks	N	8192	7229	68	36	42	50	70	51	8372	7366
	%	97.84	98.14	0.81	0.48	0.50	0.67	0.83	0.69	100	100
Scholarship for regular attendance	N	35	5645	5	5	2	1	0	0	42	5651
	%	83.33	99.89	11.90	0.08	4.76	0.01	0	0	100	100
Other Schemes	N	898	814	0	0	318	304	461	522	1677	1640
	%	53.54	49.63	0	0	18.96	18.53	27.48	31.82	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal and other schemes from SC and Others categories to both boys and girls were more benefited. But free textbooks and scholarship for regular attendance were available to both boys and girls from SC categories. But free uniform is not available to even a single student.

Instructional Time

Average number of working days in schools was approximately 207 days, Schools were having approximately 6 periods in a day of approximately of 38 minutes duration. Further, maximum number of working days were in Sangrur and minimum were in Ludhiana district.

Educational Committees

The data given in the Table 6 reveals that out of total 185 schools, 131(70.81%) schools were having Village Education Committees (VEC). Area Education Committees and School Management Committees were found more in urban schools than rural schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	117	14	131
	%	79.59	36.84	70.81
AEC	N	19	11	30
	%	12.93	28.95	16.22
SMC	N	34	9	43
	%	23.13	23.68	23.24
PTA	N	126	32	158
	%	85.71	84.21	85.41

TEACHERS PROFILE

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	147	172	36.06	305	63.94	477	3	42
Urban	38	12	6.56	171	93.44	183	5	44
Total	185	184	27.88	476	72.12	660	4	43

Table 7 shows that overall number of female teachers were more than male teachers. The number of female teachers in both urban and rural schools was more than male teachers. The average number of teachers per school in rural and urban areas was 3 and 5 respectively. Further, average pupil-teacher ratio was 43:1, however, this ratio was 44:1 approximately in urban schools.

Educational Qualification

The percentage of male teachers holding PG degree was more than female teachers. The same trend was observed for teacher holding graduation degree. Further, percentage of female teachers studied upto secondary and sr. secondary level was higher than their counterparts. Besides, no female teacher was qualified below Class X level. Only 3% male teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	3	3.26	31	33.7	23	25	23	25	12	13.04	92
Female	0	0	111	50.68	56	25.57	28	12.79	24	10.96	219
Total	3	0.96	142	45.66	79	25.4	51	16.4	36	11.58	311

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	8	8.7	56	60.87	22	23.91	6	6.52	92
	Female	18	8.22	153	69.86	39	17.81	9	4.11	219
	Total	26	8.36	209	67.2	61	19.61	15	4.82	311
Science	Male	7	7.61	67	72.83	15	16.3	3	3.26	92
	Female	17	7.76	158	72.15	39	17.81	5	2.28	219
	Total	24	7.72	225	72.35	54	17.36	8	2.57	311
Language (Medium)	Male	5	5.43	37	40.22	23	25	27	29.35	92
	Female	6	2.74	121	55.25	45	20.55	47	21.46	219
	Total	11	3.54	158	50.8	68	21.86	74	23.79	311
Social Science	Male	7	7.61	51	55.43	13	14.13	21	22.83	92
	Female	8	3.65	146	66.67	38	17.35	27	12.33	219
	Total	15	4.82	197	63.34	51	16.4	48	15.43	311

The data reveals that in Mathematics, Science, Language and Social Science, the percentage of male teachers who studied these subject upto degree level was more than female teachers. The percentage of male teachers who studied Mathematics and Language upto higher secondary level was more than female teachers. But this trend was reverse in Science and Social Science. Besides, the percentage of female teachers who studied Mathematics, Language and Social Science upto Class X was more than male teachers. The percentage of male teachers who had studied mathematics, language and social science below Class X level was more than their counterparts.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
185	Male	81	19	0
	Female	185	27	2
	Total	266	46	2

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few female teachers were having M.Ed. degree. Besides, approximately, 1/6th of total female teachers had B.Ed.

Availability of Teaching Aids

Data collected illustrates that all teaching aids were available to more than 85% teachers in urban schools except others. Similarly, majority of teaching aids were available to more than 88% teachers in rural schools except Science kit and Mathematics kit. Genderwise, most of the teaching aids such as teachers' guide, dictionary, globes, were more available to female teachers than male teachers. This trend was almost similar in rural areas, except for maps, globe, charts and flash cards.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	0
	%	0
2. Block Resource Centre	N	0
	%	0
3. Teacher Resource Centre	N	1
	%	0
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	84
	%	95.35
6. SCERT	N	2
	%	2.3
7. Others	N	1
	%	1.15

The in-service training programme were organised in the various institutions in the district during last three years and teachers from both rural and urban areas attended the same. Some teachers attended the training programme conducted by DIET.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	66
2. Content Enrichment	1
3. Production of Instructional Material	3
4. Use of Instructional Material	2
5. Assessment of Pupil Learning	2
6. Competency based Teaching Learning	11
7. Activity based Joyful Learning	1
8. Others	5

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training' and it was followed by 'Competency-based Teaching Learning'. Only one programme was conducted in 'Content Enrichment' and 'Activity-based Joyful Learning'.

Out of 311 sampled teachers 223(71.7%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 67% and 74% respectively. However, percentage of female teachers in rural schools and male teacher in urban schools was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge Gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	31	31	39	32
	%	35.23	35.23	44.32	36.36
Average	N	57	55	47	55
	%	64.77	62.5	53.4	62.5
Low	N	0	2	2	1
	%	0	2.27	2.27	1.14

It is evident that approximately 65% training programmes were average effective in terms of utility of knowledge gained during training programmes. Only 35% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 53% to 64% teachers in different subjects. However, improvement in teaching skills in all subjects due to these training programmes was rated 'High' by 35% to 44% teachers.

Academic Assistance received from Various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 98% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	85	2.70	76	2.42
Illiterate	856	27.24	1430	45.50
Literate	149	4.74	141	4.49
Primary	543	17.28	700	22.27
Secondary	1246	39.64	686	21.83
Sr. Secondary	162	5.15	56	1.78
Degree and above	54	1.72	9	0.29
Donot Know/Cannot say	48	1.53	45	1.43

Table 14 indicates that approximately 27% father and 46% mother of the students were illiterate. Only 2% fathers and less than one percent mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	83	25	108	36	13	49
Household/ Housewife	14	5	19	2169	514	2683
Farmer	472	30	502	14	3	17
Poultry farming	9	0	9	0	0	0
Agricultural labour	438	44	482	29	13	42
Picking forest produce	10	4	14	0	0	0
Domestic Servent	66	7	73	32	40	72
Street Vender	44	36	80	3	1	4
Manual unskilled worker	253	132	385	27	30	57
Skilled worker	503	252	755	46	28	74
Clerical worker	51	7	58	1	0	1
Shopkeeper	104	68	172	10	6	16
Employer	254	38	292	17	10	27
Manager/Senior Officer	25	4	29	0	0	0
Others	118	47	165	60	41	101

In both rural and urban areas majority of mothers were housewives and fathers were skilled worker. Only few fathers were Manager/Senior Officers, but not a single mother was manager/senior officer. In decreasing order, fathers were working as skilled worker, farmer, agricultural labour, manual unskilled worker/employer, others and street vendor etc. In decreasing order mothers were working as household/housewives, others, skilled worker, domestic servant, manual skilled worker and agricultural labour etc.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	428	443	101	96	529	539
	%	34.19	37.16	29.97	26.52	33.29	34.68
Mother	N	265	301	63	79	328	380
	%	21.17	25.25	18.69	21.82	20.64	24.45
Elder Brother/Sister	N	471	456	113	140	584	596
	%	37.62	38.26	33.53	38.67	36.75	38.35
Others	N	65	81	23	36	88	117
	%	5.19	6.8	6.82	9.94	5.54	7.53

Girls and boys both in rural, and urban as well as overall were getting more help from elder brother/sister than any other. However, in rural areas girls were getting more academic assistance from father, than boys but the trend was reverse in urban areas. The descending order of academic assistance provided by the family members was elder brother and sisters, father and mother.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. The percentage of boys and girls attending school between 80-90% of working days was 23% and 20% respectively. Less than 1% percent boys and girls were attending schools less than 60% of total working days. Approximately, 99% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Punjab. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

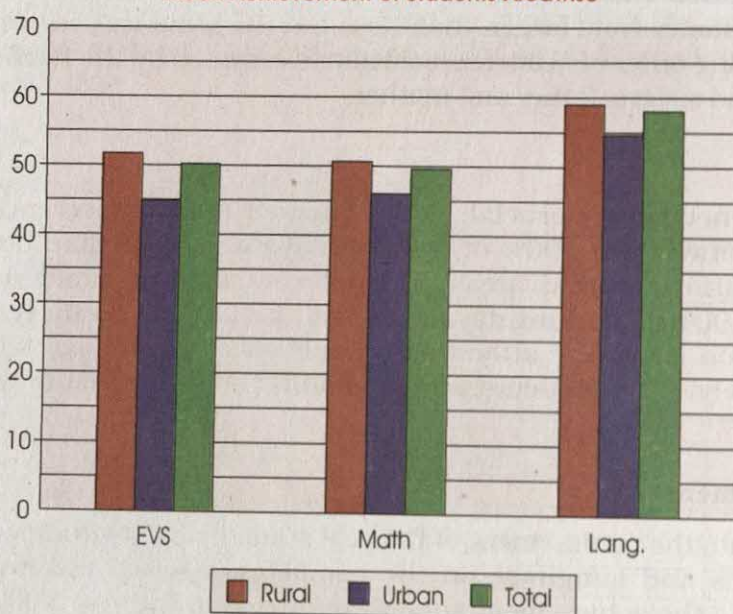
Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

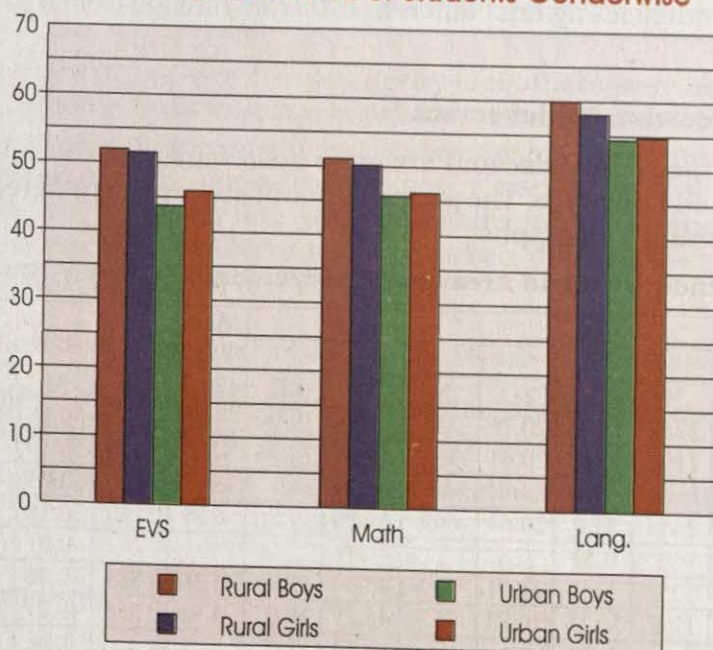
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1252	51.91	20.76	337	43.73	19.94	-8.18	1589	50.18	20.85	-6.63
	Girls	1192	51.47	20.61	362	45.97	19.76	-5.5	1554	50.19	20.54	-4.59
	Diff.		0.44			-2.24				-0.01		
	Total	2444	51.7	20.69	699	44.89	19.86	-6.81	3143	50.18	20.7	-7.92
	CR Value		0.53			-1.49				-0.01		
Mathematics	Boys	1252	51.1	21.51	337	45.74	19.75	-5.36	1589	49.96	21.26	-4.34
	Girls	1192	50.18	20.83	362	46.27	23.07	-3.91	1554	49.27	21.43	-2.89
	Diff.		0.92			-0.53				0.69		
	Total	2444	50.65	21.18	699	46.02	21.52	-4.63	3143	49.62	21.34	-5.03
	CR Value		1.07			-0.33				0.91		
Language	Boys	1252	59.92	15.12	337	54.43	16.97	-5.49	1589	58.76	15.68	-5.39
	Girls	1192	58.09	15.44	362	54.78	16.84	-3.31	1554	57.32	15.84	-3.34
	Diff.		1.83			-0.35				1.44		
	Total	2444	59.03	15.3	699	54.61	16.89	-4.42	3143	58.05	15.77	-6.23
	CR Value		2.96			-0.27				2.56		

Mean Achievement of Students-Areawise



Mean Achievement of Students-Genderwise



Environmental Studies

The data reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Mathematics

The data reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Language

The data reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. The achievement of boys was significantly better than girls. In rural areas, achievement of boys was significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Gram- mar & Usage	Boys	1252	61.5	15.38	337	57.5	17.18	-4	1589	60.65	15.86	-3.88
	Girls	1192	60.33	15	362	56.81	17.11	-3.52	1554	59.51	15.58	-3.52
	Diff.		1.17			0.69				1.14		
	Total	2444	60.93	15.21	699	57.14	17.13	-3.79	3143	60.09	15.73	-5.28
	CR Value		1.9			0.53				2.03		
Compre- hension	Boys	1252	57.28	20.21	337	49.32	21.08	-7.96	1589	55.59	20.65	-6.21
	Girls	1192	54.36	21.2	362	51.4	20.45	-2.96	1554	53.67	21.06	-2.39
	Diff.		2.92			-2.08				1.92		
	Total	2444	55.86	20.74	699	50.4	20.77	-5.46	3143	54.64	20.87	-6.13
	CR Value		3.48			-1.32				2.58		

The data reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. Further, achievement of boys was significantly better than girls.

Reading Comprehension

The data reveals that achievement of rural students, both boys and girls, was significantly better than their urban counterparts. The achievement of boys was significantly better than girls. In rural areas, achievement of boys was significantly better than girls.

Genderwise and Categorywise Achievement

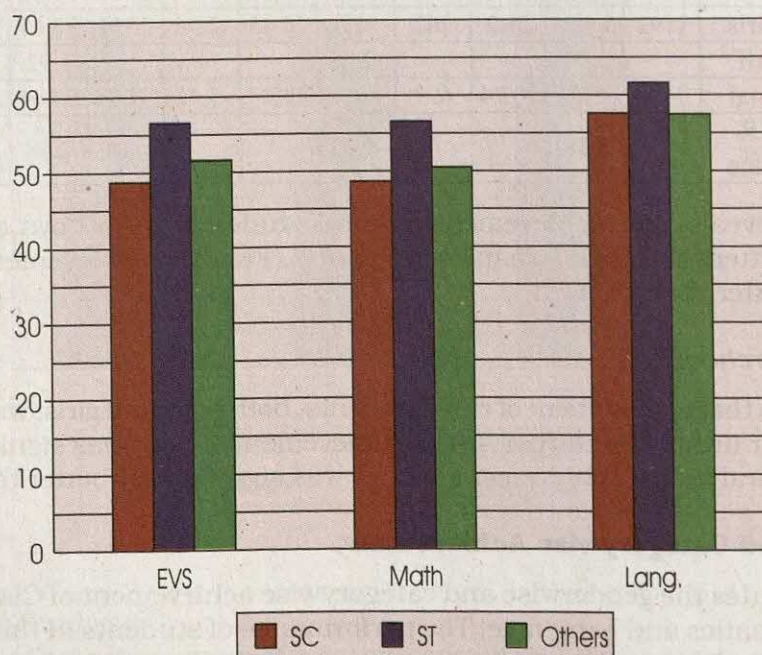
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

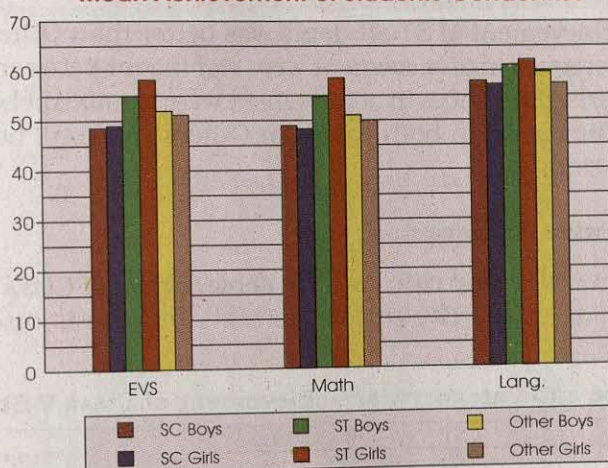
Table 19: Genderwise and Category-wise Data																
Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	852	48.54	20.66	24	55	24.92	713	51.97	20.79	3.43	3.26	-3.03	-0.59	6.46	1.26
	Girls	733	48.93	20.27	21	58.21	26.9	800	51.12	20.53	2.19	2.1	-7.09	-1.2	9.28	1.57
	Diff.		-0.39			-3.21			0.85							
	Total	1585	48.72	20.48	45	56.5	25.62	1513	51.53	20.65	2.81	3.8	-4.97	-1.29	7.78	2.02
	CR Value		0.38			0.41			0.80							
Mathe- matics	Boys	852	48.92	21.19	24	54.83	25.79	713	51.04	21.13	2.12	1.97	-3.79	-0.71	5.91	1.11
	Girls	733	48.28	21.44	21	58.52	21.44	800	49.94	21.36	1.66	1.52	-8.58	-1.81	10.24	2.16
	Diff.		0.64			-3.69			1.1							
	Total	1585	48.62	21.3	45	56.55	23.67	1513	50.46	21.26	1.84	2.41	-6.09	-1.71	7.93	2.22
	CR Value		0.60			-0.52			1.07							
Langu- age	Boys	852	57.89	15.94	24	61.15	18.78	713	59.71	15.22	1.82	2.31	-1.44	-0.37	3.26	0.84
	Girls	733	57.2	16.32	21	62.14	17.79	800	57.31	15.32	0.11	0.14	-4.83	-1.23	4.94	1.26
	Diff.		0.69			-0.99			2.4							
	Total	1585	57.57	16.12	45	61.61	18.12	1513	58.44	15.32	0.87	1.54	-3.17	-1.16	4.04	1.48
	CR Value		0.85			-0.18			3.05							

Environmental Studies

The data reveals that achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs SC and ST vs SC. The achievement of both boys and girls of Others category was significantly better than their counterparts in SC category. Within categories, there was no gender wise significant difference in achievement.

Mean Achievement of Students-Categorywise

Mean Achievement of Students-Genderwise



Mathematics

The data reveals that achievement of ST students was significantly better than Others followed by SC students and the differences in achievement were significant between Others vs SC and ST vs SC. In case of boys, performance of Others was significantly better than SC boys whereas ST girls performed significantly better than SC girls.

Language

The data reveals that across the categories, the differences in achievement were significant only between boys of Others and SC categories favouring Others. In Others category, boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	852	59.66	16.27	24	60.67	18.79	713	61.84	15.19	2.18	2.74	1.17	0.3	1.01	0.26
	Girls	733	59.29	16.08	21	60.57	19.28	800	59.69	15.03	0.4	0.5	-0.88	-0.21	1.28	0.3
	Diff.		0.37			0.1			2.15							
	Total	1585	59.49	16.18	45	60.62	18.8	1513	60.7	15.14	1.21	2.15	0.08	0.03	1.13	0.4
	CR Value		0.45			0.02			2.76							
Reading Comprehension	Boys	852	54.94	20.61	24	61.94	21.85	713	56.17	20.64	1.23	1.17	-5.77	-1.27	7	1.55
	Girls	733	53.72	21.26	21	64.76	18.27	800	53.33	20.88	-0.39	-0.36	-11.43	-2.82	11.04	2.72
	Diff.		1.22			-2.82			2.84							
	Total	1585	54.37	20.91	45	63.26	20.08	1513	54.67	20.81	0.3	0.4	-8.59	-2.82	8.89	2.93
	CR Value		1.16			-0.47			2.66							

The data reveals that achievement of students of Others category was significantly better than SC students. In case of boys, Others performed significantly better than SC. In Others category, boys performed significantly better than girls.

Reading Comprehension

The data reveals that achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs ST and ST vs SC. In case of girls, differences in achievement were significant between Others vs ST and ST vs SC favouring ST in both cases. In Others category, boys performed significantly better than girls.

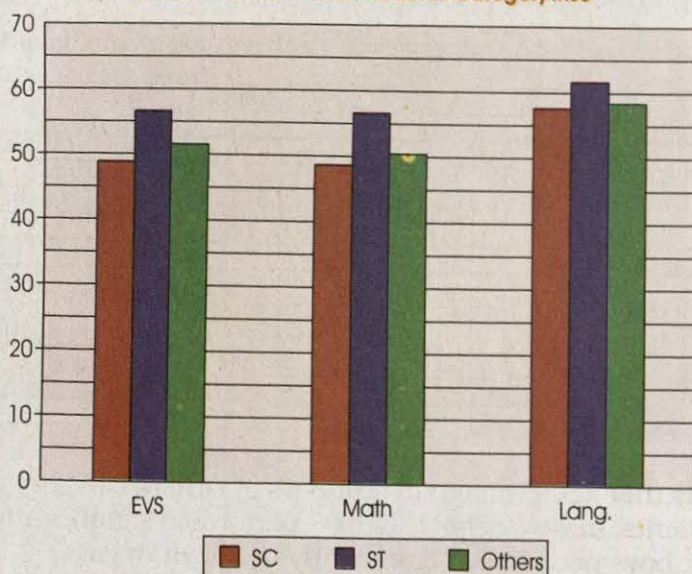
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

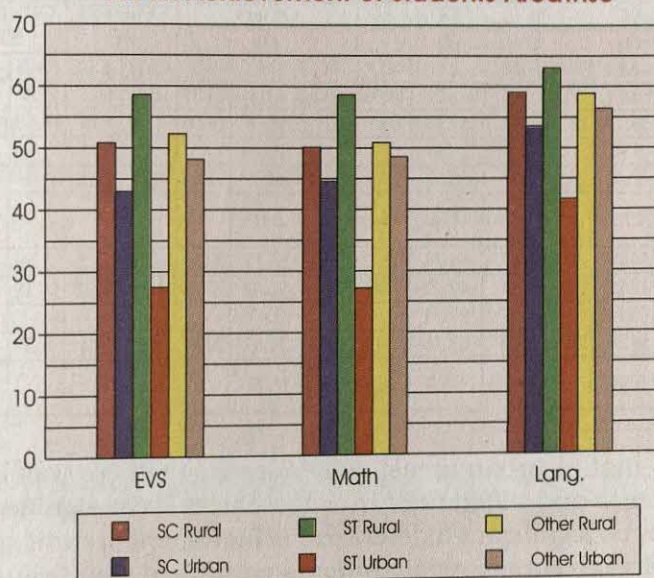
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Rural	1158	50.84	20.48	42	58.57	25.2	1244	52.26	20.67	1.42	1.69	-6.31	-1.6	7.73	1.96
	Urban	427	42.97	19.37	3	27.5	8.66	269	48.13	20.28	5.16	3.33	20.63	4.01	-15.47	-3.04
	Diff.		7.87			31.07			4.13							
	Total	1585	48.72	20.48	45	56.5	25.62	1513	51.53	20.65	2.81	3.8	-4.97	-1.29	7.78	2.02
	CR Value		7.07			4.91			3.02							
Mathematics	Rural	1158	50.12	20.9	42	58.65	23.08	1244	50.87	21.34	0.75	0.87	-7.78	-2.15	8.53	2.36
	Urban	427	44.55	21.87	3	27.19	4.02	269	48.55	20.78	4	2.42	21.36	8.08	-17.36	-6.81
	Diff.		5.57			31.46			2.32							
	Total	1585	48.62	21.3	45	56.55	23.67	1513	50.46	21.26	1.84	2.41	-6.09	-1.71	7.93	2.22
	CR Value		4.55			7.40			1.65							
Language	Rural	1158	59.04	15.38	42	63.04	17.91	1244	58.88	15.12	-0.16	-0.26	-4.16	-1.49	4	1.43
	Urban	427	53.57	17.35	3	41.67	2.89	269	56.41	16.04	2.84	2.2	14.74	7.62	-11.9	-6.37
	Diff.		5.47			21.37			2.47							
	Total	1585	57.57	16.12	45	61.61	18.12	1513	58.44	15.32	0.87	1.54	-3.17	-1.16	4.04	1.48
	CR Value		5.74			6.62			4.85							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas, ST students performed significantly better than SC students. In urban areas, achievement of Other students was better than SC followed by ST and differences in achievement were significant across the categories. Within categories, rural students performed significantly better than urban students in each category.

Mathematics

The data reveals that in rural areas, ST students performed significantly better than both Others as well as SC students. In urban areas, achievement of Others was better than SC followed by ST students and differences in achievement were significant across the categories. In SC and ST categories, rural students performed significantly better than urban students.

Language

The data reveals that in urban areas, achievement of Others was better than SC followed by ST students and differences in achievement were significant across the categories. There was no significant difference in achievement of rural students across the categories. Within categories, rural students performed significantly better than urban students in each category.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Rural	1158	60.71	15.4	42	62	18.66	1244	61.1	14.91	0.39	0.63	-0.9	-0.31	1.29	0.44
	Urban	427	56.17	17.72	3	41.33	6.11	269	58.86	16.06	2.69	2.07	17.53	4.79	-14.84	-4.09
	Diff.		4.54			20.67			2.24							
	Total	1585	59.49	16.18	45	60.62	18.8	1513	60.7	15.14	1.21	2.15	0.08	0.03	1.13	0.4
	CR Value		4.69			4.54			2.10							
Reading Comprehension	Rural	1158	56.27	20.58	42	64.76	19.93	1244	55.17	20.86	-1.1	-1.3	-9.59	-3.06	8.49	2.71
	Urban	427	49.23	20.97	3	42.22	3.85	269	52.34	20.44	3.11	1.94	10.12	3.97	-7.01	-2.87
	Diff.		7.04			22.54			2.83							
	Total	1585	54.37	20.91	45	63.26	20.08	1513	54.67	20.81	0.3	0.4	-8.59	-2.82	8.89	2.93
	CR Value		5.96			5.94			2.05							

The data reveals that in urban areas, achievement of Others was better than SC followed by ST students and differences in achievement were significant across the categories. There was no significant difference in achievement of rural students across the categories. Within categories, rural students performed significantly better than urban students in each category.

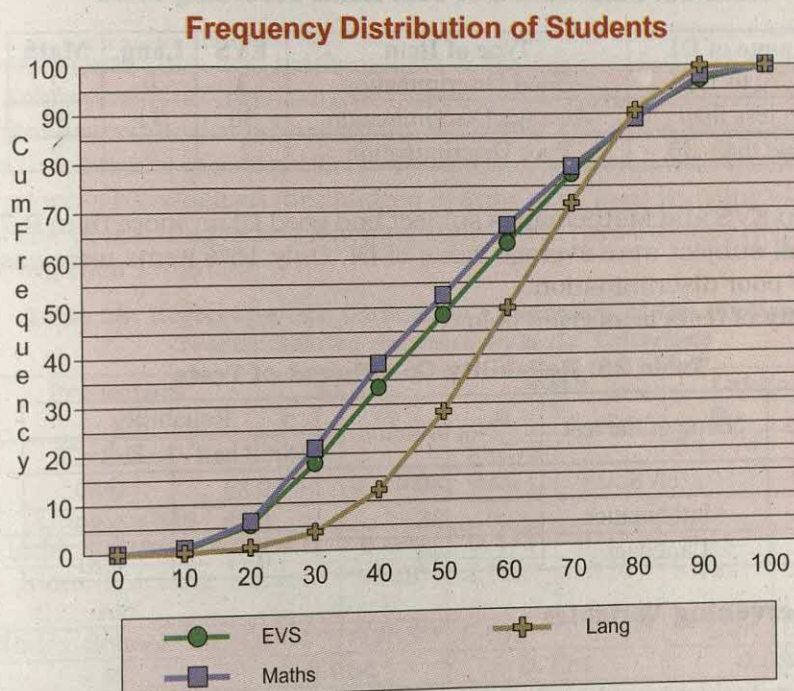
Reading Comprehension

The data reveals that in rural areas, ST students performed significantly better than both Others as well as SC students. In urban areas, performance of Others was better than SC followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. Within categories, achievement of rural students was significantly better than urban students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	21	154	392	487	467	466	449	381	262	64
	cf	21	175	567	1054	1521	1987	2436	2817	3079	3143
	cf(%)	0.67	5.57	18.04	33.53	48.39	63.22	77.51	89.63	97.96	100
Math	f	32	164	468	544	441	453	382	314	281	64
	cf	32	196	664	1208	1649	2102	2484	2798	3079	3143
	cf(%)	1.0	6.24	21.13	38.43	52.47	66.88	79.03	89.02	97.96	100
Language	f	2	28	92	265	502	673	681	607	291	2
	cf	2	30	122	387	889	1562	2243	2850	3141	3143
	cf(%)	0.06	0.95	3.88	12.31	28.29	49.70	71.36	90.68	99.94	100



The figures posted in Table 23 reveal that in all the three subjects, the distribution of scores covered the entire range from 0-100 percent. The maximum number of cases in EVS (487), in Mathematics (544) and in Language (681) were in the range 30-40 percent, 30-40 percent and 60-70 percent respectively. Further, 51.61% students in EVS, 47.53% in Mathematics and 71.71% in Language scored more than 50% marks whereas 36.78% in EVS, 33.12% in Mathematics and 50.30% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items According to Facility Values

Facility Value	Type of Item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	3	3
25 to less than 50	Difficult	21	16	16
50 to less than 75	Average	17	18	18
75 to 100	Very Easy	1	9	1

About 52% items in EVS, 40% in Language and 42% in Mathematics were difficult. But very below items in every subject were very difficult. However, about 42% items had belonged to the category of average. Nearly 22% items in Language were very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of Item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	3	0	2
.30 to less than .70	Average Discrimination	36	31	34
Less than .30	Poor Discrimination	1	6	2

Few items in EVS and Mathematics subject had good DI or more than 0.70. About 85% items in all subject were average value of DI. Only 15% items were easy, hence there were very poor discrimination.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.83	0.89
2	Mathematics	38	0.80	0.89
3	Language	40	0.71	0.81

Impact of Intervening Variables School

Availability of physical and teaching learning material influence the learning achievement of children in three subjects. The positive association of these variables with the three criterions indicates that availability of facilities and teaching learning material in school help the children in improving their learning achievement in the three subjects i.e., EVS, Mathematics and Language. Availability of Physical facilities also help the children in improving their learning skills in Mathematics and Language. The negative association of Pupil-teacher ratio with the criterion indicates that higher the number of children in a class, result in the poor performance of the children.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	46.228	--	48.624	--	62.492	--
PTR	-0.146*	-0.145*	-0.104*	-0.117	-0.085*	-0.131*
Com_Participation	0.0903	0.064	0.283	0.048	1.587	0.149*
Teach-aid	0.369	0.096	0.369	0.150*	0.327	0.128
Physical facility	0.584	0.120	1.332*	0.243**	0.408*	0.163*
Ancillary facility	0.139*	0.012*	0.231	0.015	0.102	0.008
Instructional time	0.039	0.012	0.010	0.012	0.027	0.012
Working day	0.095	0.013	0.011	0.013	0.084	0.030
Index-Comp. TLM	7.032**	0.289**	8.568*	0.350**	5.016**	-0.320**
R²	0.152		0.169		0.161	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 15.2% of total variance in EVS, 16.9% in Mathematics and 16.1% in Language independently.

Teacher

The school organization and teaching aids & teaching style of teachers influence the learning achievement of children in the three subjects EVS, Mathematics and Language. The positive association of school organization with the three criteria indicates that the active involvement of senior officers of school organization with teachers in teaching-learning process have helped the children in improving their learning skills in the three subjects. Use of teaching aids & teaching style of teachers has also helped the children in improving their language.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	41.364	--	35.379	--	54.174	--
Index-Qualification	0.051	0.036**	0.071	0.033	0.016	0.041
Index-Experience	0.401	0.009	0.271	0.010	0.167	0.036
Index-Teaching Aid	2.785*	0.183**	2.722*	0.220**	3.721**	0.258**
Index-School Org.	0.984**	0.235**	1.469**	0.324**	0.438*	0.226**
R²	0.064		0.114		0.085	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.4% of total variance in EVS, 11.4% in Mathematics and 8.5% in Language independently.

Pupil

Teaching-learning processes adopted by teachers in school, age of children, educational status and occupation of parents and schooling practices and academic assistance provided by the family members to the children influence the learning achievement of children in three subjects i.e., EVS, Mathematics and Language. The positive association of teaching learning processes adopted by teachers with the three criteria indicates that active involvement of teachers in class help the children in improving their skills in the three subjects. The negative association of age of children indicates that higher the age of children, lower is the achievement. The positive association of educational status & occupation of parents indicates that parents help the children in improving the learning skills.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	62.743	--	59.313	--	72.490	--
Index-Ed & Occu	4.139**	0.118**	3.390**	0.154**	2.487**	0.110**
Index-Schooling	1.435*	0.006	0.157*	0.078**	0.082*	0.007*
Index-TLP	8.519**	0.148	6.632**	0.179**	4.241**	0.125**
Age	-0.937**	-0.098**	-0.428*	-0.079**	-0.113**	-0.092**
Detention	-0.028*	-0.029	-0.547**	-0.030	-0.283*	-0.018
Attendance	0.025	0.052**	0.072	0.012	0.022*	0.009
R²	0.060		0.043		0.033	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 6.0% of total variance in EVS, 4.3% in Mathematics and 3.3% in Language independently.

One can infer that teaching-learning processes adopted by teachers in school, availability of teaching aids and active involvement of senior officers of school organisation in teaching-learning process help the children in improving their learning achievement in the EVS, Mathematics and Language.

Hard Spot of Learning

In EVS, item No. 4 was found very difficult and 21 (53%) items were found difficult. The difficult concepts were identification of a state on the map, natural features of the country, climatic conditions at varying altitudes, boundaries with neighbouring countries, location of a state, understanding a longitude and a latitude, representative of a President of India, knowledge of postal services, knowledge of UN days, knowledge of pre-British rule, solar system, planets etc., understanding of eclipse, composition of air, effect of weather conditions on human bodies, knowledge of soil erosion, identification of simple machine, knowledge of parts of human body, conservation of wild animals and carrier of disease.

In Language, 11, 19 and 20 items were found very difficult and 10 (25%) items were found difficult. The hard spots were structure, comprehension of instructions, comprehension of informatinal passage and story.

In Mathematics, items 23, 29 and 37 were found very difficult and 16 (40%) items were found difficult. The hard spots were in number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

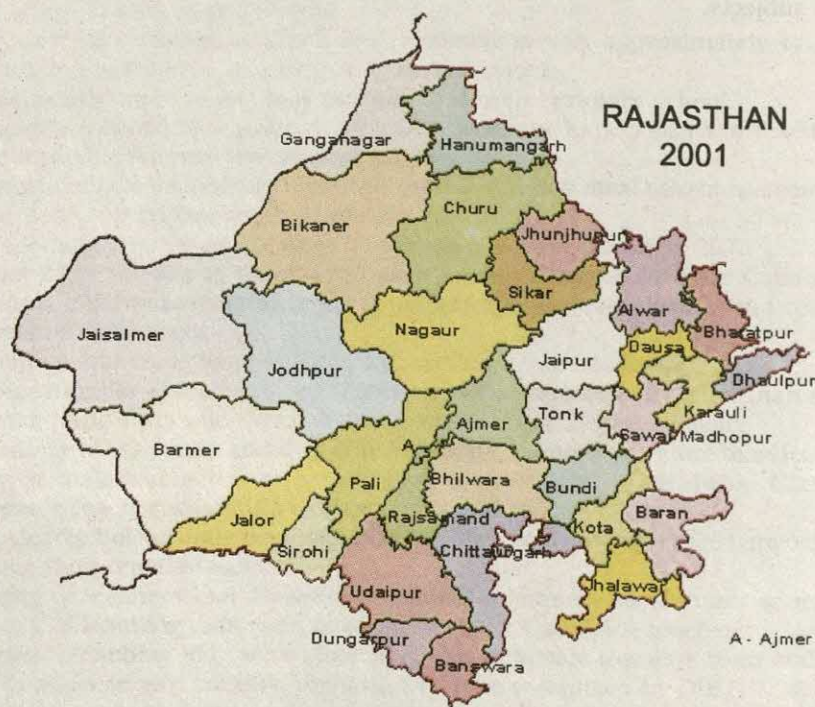
Analysis of the results signified that:

- Mats and furniture for students were available in only approximately 1/3rd schools.
- TV and computer were available only in 1% schools.
- Pre-schools were attached only primary and upper primary school.
- Competency based text books, workbooks, teachers' handbooks and teaching aids were more available for very few schools till year 2001.
- More students were getting the benefit under Mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 207.
- Almost 2/3rd schools in rural areas were having Village Education Committees.
- AEC and SMC were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers.
- Average number of teachers per school in urban schools was higher than rural schools.
- Teacher-pupil ratio was lower in rural schools than urban schools.
- Percentage of PG degree and degree holder male teachers was more than female teachers.
- Only 3% male teachers were having educational qualification below Class X level.
- No female teacher was qualified below Class X level.
- More degree holder male teachers studied Mathematics, Science, Language and Social Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET.
- Maximum in-service training programmes were conducted on 'General Training' and minimum on 'Content Enrichment and Joyful Learning' during last three years.

- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately 72% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives in rural areas.
- Approximately, 1/6th fathers were skilled worker and mothers were housewives in urban areas.
- In most of cases teachers were getting assistance from 'Head of Schools.
- For approximately 98% students medium of instructions in the school was same as the language spoken at home.
- In general, educational qualification of mothers was poorer than fathers.
- Students were getting more academic assistance from elder brother/sister than other family members.
- Rural girls were getting more academic assistance from fathers than boys in rural areas.
- Approximately, 99% students were attending schools above 70% working days.
- Approximately, less than 1% students were attending schools less than 60% of the total working days.
- Performance of others category students was significantly better than SC students in EVS and Mathematics only.
- Within SC and ST category rural students were significantly better than urban students in all three subjects.
- Performance of rural students were significantly better than urban students in all three subjects.
- Performance of boys were significantly better than girls in Language only.
- Active involvement of teachers in school, availability of teaching aids and active involvement of senior officers of school organization in teaching-learning process help the children in improving their learning achievement in the three subjects.
- Students of higher age group scored poorly in all three subjects.
- Educational qualification and occupation of the parents helped in student's performance in all three subjects.
- Academic assistance provided by the family members did not help in student's achievement in all three subjects.

INTRODUCTION

Rajasthan, the largest state of India is comprised of 5.55% of total population of India. Out of which the rural and urban population are 78% and 22% respectively. The decadal growth rate of the state is 28.33%. One must appreciate the progress made during last fifty year in the area of literacy. According to the Census of 2001 the literacy rate of Rajasthan has gone up to 61.03% from 8.95% in 1950. But, as far as women literacy is concerned, the state is way behind from the national average and need to put more and more efforts for bringing it up. There are 32 districts in the state.



The importance of the UEE has been well realised by the state government. As a result of top priority given by the state government to UEE, the target of the 8th plan in respect of opening of primary schools and upgradation of upper primary schools has been over achieved. As against the target of 3,418 primary schools, 5,830 Upper primary schools were actually opened and 2,649 upgradations were done against the target of 1420. The state government has adopted the pattern of education I to V as Primary, VI to VIII as Upper Primary, IX-X Secondary and XI to XII as Senior Secondary.

Sample

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 193 schools were sampled from Jaipur, Jalore, Jhunjunu and Udaipur districts of Rajasthan. Out of total sampled schools, 45 schools were from Jaipur, 50 from Jalore, 49 from Jhunjunu and remaining 49 from Udaipur.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	159	85	53.46	74	46.54	0	0
Urban	34	26	76.47	8	23.53	0	0
Total	193	111	57.51	82	42.49	0	0

Teachers

A total of 480 teachers were sampled from 193 sampled schools. Out of 480 teachers, 324 were male teachers and 156 were female teachers. Areawise, 390 teachers were from rural areas and 90 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Category-wise data										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	62	22.3	15	5.4	115	41.37	86	30.94	278
	Female	4	3.57	5	4.46	39	34.82	64	57.14	112
	Total	66	16.92	20	5.13	154	39.49	150	38.46	390
Urban	Male	10	21.74	0	0	19	41.3	17	36.96	46
	Female	1	2.27	0	0	7	15.91	36	81.82	44
	Total	11	12.22	0	0	26	28.89	53	58.89	90
Total	Male	72	22.22	15	4.63	134	41.36	103	31.79	324
	Female	5	3.21	5	3.21	46	29.49	100	64.1	156
	Total	77	16.04	20	4.17	180	37.5	203	42.29	480

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except Others.

Students

A total number of 2,357 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Jaipur	Rural	357	240	597
	Urban	73	72	145
	Total	430	312	742
Jalore	Rural	160	62	222
	Urban	34	17	51
	Total	194	79	273
Jhunjunu	Rural	284	262	546
	Urban	103	97	200
	Total	387	359	746
Udaipur	Rural	237	189	426
	Urban	64	106	170
	Total	301	295	596
Total	Rural	1038	753	1791
	Urban	274	292	566
	Total	1312	1045	2357

Out of 2,357 students, 1,791 students were from rural areas and remaining 566 students were from urban areas. Out of the total sample, 1,312 were boys and 1,045 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	52	32.7	107	67.3	50	31.45	2	1.26	0	0
Urban	16	47.06	16	47.06	17	50	1	2.94	0	0
Total	68	35.23	123	63.73	67	34.72	3	1.55	0	0

Table 4 indicates that out of 159 rural sampled schools, pre-primary classes were attached with only 52 schools whereas in urban areas, out of 34 sampled schools, it was attached with 16 schools. Further, approximately 67% schools in rural areas and 47% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 31% and 50% respectively for rural and urban areas. However, no school having sr. secondary classes was included in the sample.

Facilities related to teaching-learning process

It was observed that maps and children's books were available in 82% and 87% schools. Magazines, journals and newspapers were available in 47% schools. Maths kit, reference books, dictionaries, encyclopedia were available in 63% to 67% schools. However, mini tool kits were available in only 36% schools. Besides, globes and charts were available in 72% to 74% schools. But game equipment, primary science kit and charts were available in 52% to 53% schools.

Infrastructural facilities

It was observed that school bell and water pitcher, ladel and glasses were available in 85% to 88% schools. Blackboard, chairs for teachers were available in 91% and more schools. Whereas, tables for teachers were available in 74% schools. Besides, play ground and pinup board/notice board were available in 50% and 53% schools. However, musical instruments were available in only 37% schools.

Ancillary Facilities

Computer and TV facilities were available in 8% and 12% schools, respectively. Annual medical check-up for children facilities were available in 92% schools. Besides, toilet facilities were available in 61% schools. However, safe drinking water and immunisation facilities was available in 78% and 79% schools, respectively. Electric connection for the school, first aid kit and separate toilet facilities for girls were available in 32% to 36% schools.

Competency-Based Teaching Materials

Information gathered shows that out of 193 schools, competency-based textbooks were available in 38 to 42 schools for Classes I to V in the year 2001, against 6 to 7 schools for Classes I to V in the year 1998.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	1485	1084	2438	2077	2983	2681	1427	1501	8333	7343
	%	17.82	14.76	29.25	28.29	35.79	36.51	17.14	20.44	100	100
Free uniform	N	299	165	81	41	288	261	155	112	823	579
	%	36.33	28.50	9.84	7.08	34.99	45.08	18.84	19.34	100	100
Free textbooks	N	2054	1688	2387	1968	4745	3847	1754	1841	10940	9344
	%	18.78	18.07	21.82	21.06	43.37	41.17	16.03	19.70	100	100
Scholarship for regular attendance	N	349	437	341	302	220	209	109	108	1019	1056
	%	34.25	41.38	33.46	28.60	21.59	19.79	10.70	10.23	100	100
Other Schemes	N	124	156	47	33	517	571	114	90	802	850
	%	15.46	18.35	5.86	3.88	64.46	67.18	14.22	10.59	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available for both boys and girls across the categories. OBC girls were getting maximum benefit from mid-day meal, free uniform and other schemes than their male counterpart. Whereas this trend was reverse in case of free textbook. Against scholarship for regular attendance SC girls were getting maximum benefits than their male counterparts followed by ST category boys and girls.

Instructional Time

The number of working days in schools was approximately 225 days on an average, schools were having 8 periods in a day of approximately of 38 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 159 rural schools, 148(93%) schools were having Village Education Committees (VEC). Parent-Teacher Association, Area Education Committees and School-Management Committees were found more in rural schools than urban schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	148	11	159
	%	93.08	32.35	82.38
AEC	N	77	12	89
	%	48.43	35.29	46.11
SMC	N	133	26	159
	%	83.65	76.47	82.38
PTA	N	142	27	169
	%	89.31	79.41	87.56

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	159	430	66.67	215	33.33	645	4	42
Urban	34	88	51.16	84	48.84	172	5	37
Total	193	518	63.4	299	36.6	817	4	41

Table 7 shows that overall number of male teachers was more than female teachers. The average number of teachers per school in rural and urban areas was 4 and 5 respectively. Further, average pupil-teacher ratio was 41:1, however, this ratio was 37:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of male teachers who studied upto secondary or sr. secondary level was higher than their counterparts. However, the percentage of teacher who had passed only Class X was 5-6%. Besides, not a single teachers was qualified below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	19	5.86	73	22.53	141	43.52	91	28.09	324
Female	0	0	8	5.13	34	21.79	47	30.13	67	42.95	156
Total	0	0	27	5.63	107	22.29	188	39.17	158	32.92	480

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	7	2.16	272	83.95	24	7.41	21	6.48	324
	Female	4	2.56	139	89.1	9	5.77	4	2.56	156
	Total	11	2.29	411	85.63	33	6.88	25	5.21	480
Science	Male	10	3.09	241	74.38	44	13.58	29	8.95	324
	Female	9	5.77	123	78.85	11	7.05	13	8.33	156
	Total	19	3.96	364	75.83	55	11.46	42	8.75	480
Language	Male	3	0.93	84	25.93	126	38.89	111	34.26	324
	Female	0	0	34	21.79	60	38.46	62	39.74	156
	Total	3	0.63	118	24.58	186	38.75	173	36.04	480
Social Science	Male	10	3.09	189	58.33	47	14.51	78	24.07	324
	Female	8	5.13	76	48.72	20	12.82	52	33.33	156
	Total	18	3.75	265	55.21	67	13.96	130	27.08	480

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this trend was reverse in case of Language and Social Science. The percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than female teachers. But at secondary level the percentage of male teachers was higher than female teachers only in Mathematics. Besides, the percentage of female teachers who studied Mathematics, Social Science and Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
193	Male	151	179	11
	Female	76	87	11
	Total	227	266	22

Approximately, 47% teacher had diploma/certificate in Primary/Elementary Education and very few male teachers were having M.Ed degree. Besides, approximately, 50% male teachers had B.Ed.

Availability of Teaching Aids

Information reveals that all teaching aids were available to more than 85% teachers in urban schools. Similarly, teaching aids were available to more than 90% teachers in rural schools, except flash cards, science and maths tests. Genderwise, all teaching aids such as teachers' guide, dictionary, globe, flash cards, science kit, mathematics kit were more available to female teachers teaching in urban schools than male teachers, except books other than textbooks and charts. This trend was almost similar in rural areas, except for maps, charts and flash cards.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	13
	%	7.14
2. Block Resource Centre	N	19
	%	10.44
3. Teacher Resource Centre	N	2
	%	1.1
4. Cluster Resource Centre	N	12
	%	6.59
5. DIET	N	89
	%	48.9
6. SCERT	N	6
	%	3.3
7. Others	N	41
	%	22.53

Data portrays that 182 teachers were trained in the districts during last three years, 10.44% teachers were trained by Block Resource Centres, 48.9% by DIET, 7.14% by School Complex, 6.59% by Cluster Resource Centre, and 3.3% by SCERT. However, minimum number of teachers were trained in Teacher Resource Centre i.e., only 1.1%.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	27
2. Content Enrichment	26
3. Production of Instructional Material	18
4. Use of Instructional Material	7
5. Assessment of Pupil Learning	26
6. Competency based Teaching Learning	59
7. Activity based Joyful Learning	15
8. Others	50

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Competency-based Teaching-Learning' and minimum programmes were conducted on 'Use of Instructional Material'. Out of total 480 teachers, 294(61.25%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 60% and 64%, respectively. Further, in urban areas the percentage of male and female teachers who had not attended any training programme was 77% and 78%, respectively. However, percentage of female teachers in rural schools and male teachers in urban schools was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	90	82	89	76
	%	48.39	44.09	47.85	40.86
Average	N	89	100	94	104
	%	47.85	53.76	50.53	55.91
Low	N	7	4	3	6
	%	3.76	2.15	1.61	3.22

It is evident that approximately 48% training programmes were averagely effective in terms of utility of knowledge gained during training programmes. Besides, 48% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 51% to 56% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 41% to 48% teachers.

Academic Assistance received from Various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by Other teachers of the School.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 86% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	86	3.65	94	3.90
1. Illiterate	484	20.53	1327	56.30
2. Literate	324	13.75	488	20.70
3. Primary	401	17.01	196	8.32
4. Secondary	705	29.91	155	6.58
5. Sr. Secondary	130	5.52	25	1.06
6. Degree and above	148	6.28	16	0.68
7. Do not Know/ Cannot say	79	3.35	56	2.38

Table 14 indicates that approximately 21% father and 56% mother of the students were illiterate. Only 6% father and less than 1% mother were having degree or higher educational qualifications. Further, majority of the remaining fathers were educated either upto primary level or secondary level but mothers were literate. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	67	22	89	138	2	140
Household/ Housewife	18	2	20	1525	497	2022
Farmer	709	72	781	40	27	67
Poultry farming	5	1	6	0	0	0
Agricultural labour	172	37	209	46	5	51
Picking forest produce	4	0	4	0	0	0
Domestic Servent	10	8	18	1	9	10
Street Vender	22	13	35	8	3	11
Manual unskilled worker	77	19	96	10	0	10
Skilled worker	343	145	488	6	5	11
Clerical worker	37	37	74	0	0	0
Shopkeeper	129	84	213	1	1	2
Employer	27	15	42	0	1	1
Manager/Senior Officer	85	43	128	6	9	15
Others	86	68	154	10	7	17

In rural areas, majority of mothers were housewives and fathers were farmers. In urban areas, majority of mothers were housewives and fathers were skilled workers. Only few mothers were Manager/Senior Officers. Number of Manager/Senior Officers fathers was more than mothers. In decreasing orders, fathers were working as farmer, skilled worker, shopkeeper, agricultural labour, others, manager/senior officer, others and manual unskilled worker etc. In decreasing order, mothers were working as household/housewives, farmer, agricultural labour, others, manager/senior officers, etc.

Academic Assistance

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	392	326	119	179	511	505
	%	37.76	43.29	43.43	61.3	38.95	48.33
Mother	N	204	175	79	97	283	272
	%	19.65	23.24	28.83	33.22	21.57	26.03
Elder Brother/ Sister	N	309	259	92	120	401	379
	%	29.77	34.4	33.58	41.1	30.56	36.27
Others	N	77	74	46	28	123	102
	%	7.42	9.83	16.79	9.59	9.38	9.76

Girls and boys both in rural and urban as well as overall were getting more help from father/guardian than any other. However, in both urban and rural areas girls were getting more academic assistance from father, than boys. In general, girls were getting more academic assistance from family members than boys. The descending order of academic assistance provided by the family members was father, elder brother, sisters and mothers.

Attendance

The role of attendance is very crucial. It is observed that the percentage of boys attending school between 90-100% of working days was more than girls i.e., 51% and 49%. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was 27% and 28% respectively. Only 2% percent boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

STUDENTS ACHIEVEMENT

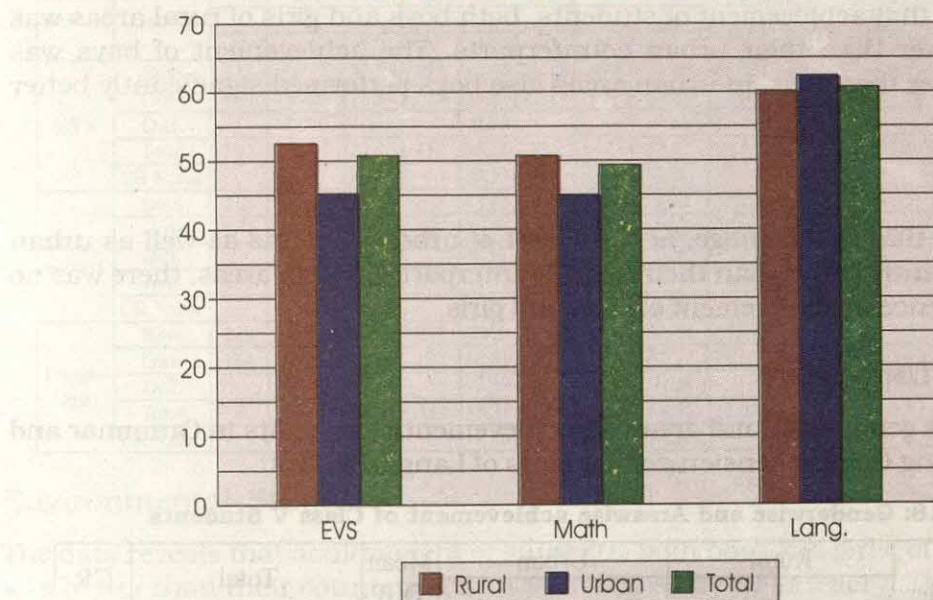
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Rajasthan. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

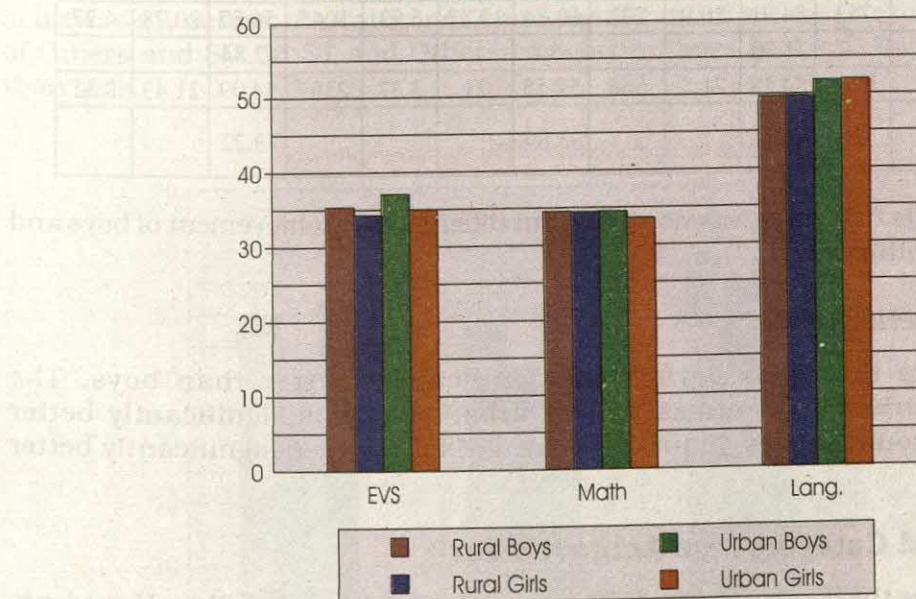
Table 17: Genderwise and Areawise Achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1038	52.3	21.26	274	46.92	21.24	-5.38	1312	51.18	21.36	-3.73
	Girls	753	52.85	21.39	292	43.6	20.39	-9.25	1045	50.26	21.51	-6.49
	Diff.		-0.55			3.32				0.92		
	Total	1791	52.53	21.31	566	45.2	20.85	-7.33	2357	50.77	21.43	-7.25
	CR Value		-0.54			1.89				1.03		
Mathe- matics	Boys	1038	51.28	20.82	274	48.27	21.46	-3.01	1312	50.65	20.98	-2.08
	Girls	753	50.01	19.9	292	41.95	20.97	-8.06	1045	47.76	20.52	-5.65
	Diff.		1.27			6.32				2.89		
	Total	1791	50.75	20.45	566	45.01	21.42	-5.74	2357	49.37	20.82	-5.62
	CR Value		1.31			3.54				3.36		
Langu- age	Boys	1038	60	17.71	274	60.97	18.85	0.97	1312	60.2	17.95	0.77
	Girls	753	60.29	16.75	292	63.62	16.59	3.33	1045	61.22	16.77	2.9
	Diff.		-0.29			-2.65				-1.02		
	Total	1791	60.12	17.31	566	62.34	17.75	2.22	2357	60.65	17.44	2.61
	CR Value		-0.35			-1.77				-1.42		

Mean Achievement of Students-Areawise

Environmental Studies

The data reveals that achievement of students, both boys and girls of rural areas was significantly better than their urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Mean Achievement of Students-Genderwise

Mathematics

The data reveals that achievement of students, both boys and girls of rural areas was significantly better than their urban counterparts. The achievement of boys was significantly better than girls. In urban areas also boys performed significantly better than girls.

Language

The data reveals that in Language, achievement of urban students as well as urban girls was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	1038	63.8	18.08	274	65.12	20	1.32	1312	64.08	18.5	0.99
	Girls	753	63.52	17.76	292	65.29	17.93	1.77	1045	64.01	17.81	1.44
	Diff.		0.28			-0.17				0.07		
	Total	1791	63.68	17.94	566	65.21	18.94	1.53	2357	64.05	18.2	1.7
	CR Value		0.33			-0.11				0.09		
Compre- hension	Boys	1038	53.65	21.92	274	54.04	21.63	0.39	1312	53.73	21.85	0.26
	Girls	753	54.91	20.9	292	60.84	19.87	5.93	1045	56.57	20.78	4.27
	Diff.		-1.26			-6.8				-2.84		
	Total	1791	54.18	21.5	566	57.55	21	3.37	2357	54.99	21.43	3.31
	CR Value		-1.23			-3.89				-3.22		

The data reveals that there was no significant difference in achievement of boys and girls across and within areas.

Reading Comprehension

The data reveals that girls performed significantly better than boys. The achievement of urban students as well as urban girls was significantly better than their rural counterparts. In urban areas, girls performed significantly better than boys.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

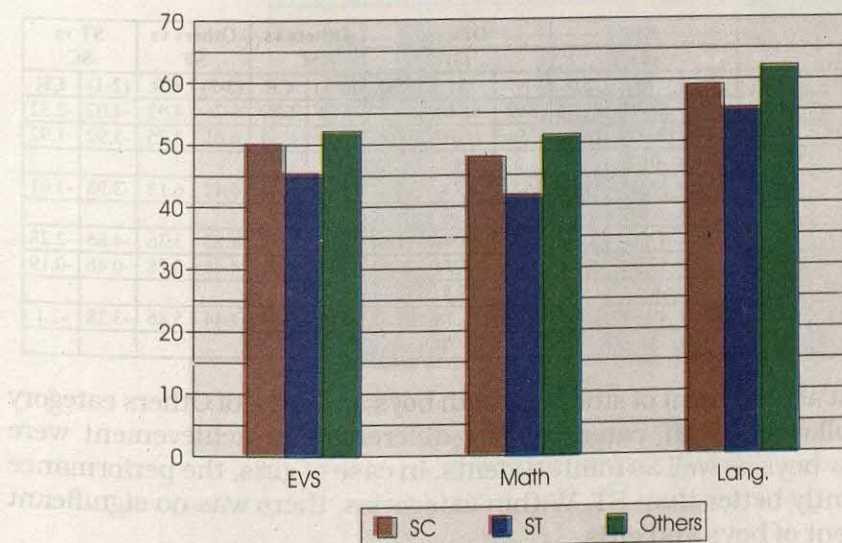
Subject	Gender	SC (1)			ST (2)			Others (3)			Others vs SC		Others vs ST		ST vs SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	218	50.17	22.26	225	44.94	20.18	869	53.05	21.13	2.88	1.73	8.11	5.32	-5.23	-2.59
	Girls	164	49.8	22.34	127	45.83	22.18	754	51.11	21.14	1.31	0.69	5.28	2.5	-3.97	-1.51
	Diff.		0.37			-0.89			1.94							
	Total	382	50.01	22.26	352	45.26	20.9	1623	52.15	21.15	2.14	1.71	6.89	5.59	-4.75	-2.98
	CR Value		0.16			-0.37			1.84							
Mathe- matics	Boys	218	47.75	21.24	225	43.65	18.02	869	53.2	21.15	5.45	3.39	9.55	6.82	-4.1	-2.19
	Girls	164	47.99	21.83	127	38.31	15.78	754	49.3	20.53	1.31	0.7	10.99	6.92	-9.68	-4.39
	Diff.		-0.24			5.34			3.9							
	Total	382	47.86	21.47	352	41.72	17.41	1623	51.38	20.95	3.52	2.9	9.66	9.08	-6.14	-4.27
	CR Value		-0.11			2.89			3.76							
Langu- age	Boys	218	58.76	17.52	225	54.5	17.58	869	62.04	17.82	3.28	2.46	7.54	5.72	-4.26	-2.55
	Girls	164	59.51	16.61	127	56.89	15.93	754	62.32	16.81	2.81	1.96	5.43	3.52	-2.62	-1.37
	Diff.		-0.75			-2.39			-0.28							
	Total	382	59.08	17.12	352	55.36	17.02	1623	62.17	17.35	3.09	3.17	6.81	6.78	-3.72	-2.95
	CR Value		-0.43			-1.30			-0.33							

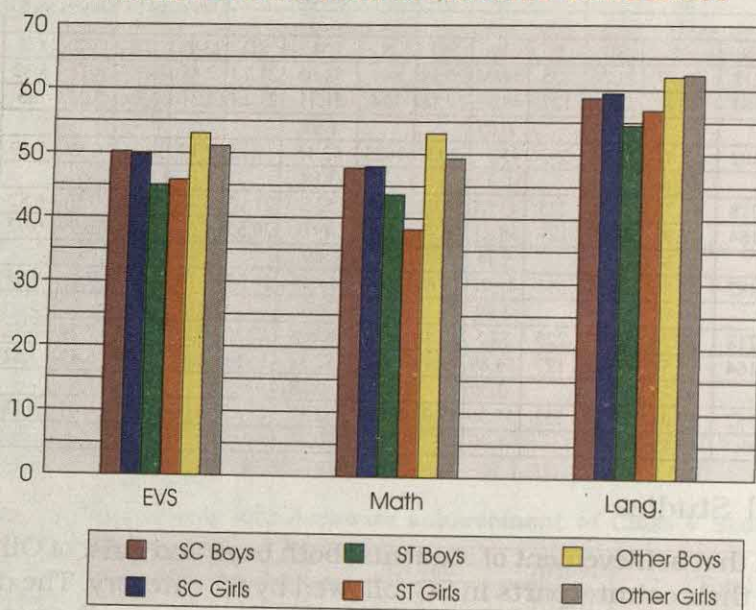
Environmental Studies

The data reveals that achievement of students, both boys and girls, of Others category was better than their counterparts in SC followed by ST category. The differences in achievement between Others vs ST were significant in all cases. Whereas between ST vs SC, these differences were significant in case of boys and total students. Within categories, there was no significant difference in achievement between boys and girls.

Mathematics

The data reveals that achievement of students, both boys and girls of Others category was better than their counterparts in SC followed by ST category and the differences in achievement across the categories were significant in all cases except between girls of Others and SC. In ST and Others categories, boys performed significantly better than girls.

Mean Achievement of Students-Categorywise

Mean Achievement of Students-Genderwise

Language

The data reveals that achievement of students, both boys and girls, of Others category was better than their counterparts in SC followed by ST category and the differences in achievement across the categories were significant in all cases except between girls of ST and SC. Within categories, there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	218	62.95	18.17	225	58.93	18.36	869	65.69	18.37	2.74	1.99	6.76	4.92	-4.02	-2.32
	Girls	164	62.98	18.18	127	59.06	16.49	754	65.07	17.82	2.09	1.34	6.01	3.75	-3.92	-1.92
	Diff.		-0.03			-0.13			0.62							
	Total	382	62.96	18.15	352	58.98	17.68	1623	65.4	18.11	2.44	2.36	6.42	6.15	-3.98	-3.01
	CR Value		-0.02			0.07			0.69							
Reading Comprehe nsion	Boys	218	51.77	20.97	225	47.11	22.1	869	55.94	21.64	4.17	2.61	8.83	5.36	-4.66	-2.28
	Girls	164	53.74	19.92	127	53.28	20.34	754	57.74	20.94	4	2.31	4.46	2.28	-0.46	-0.19
	Diff.		-1.97			-6.17			-1.8							
	Total	382	52.62	20.52	352	49.34	21.66	1623	56.78	21.33	4.16	3.54	7.44	5.86	-3.28	-2.1
	CR Value		-0.94			-2.65			-1.70							

The data reveals that achievement of students, both boys and girls, of Others category was better than SC followed by ST category. The differences in achievement were significant in all case for boys as well as total students. In case of girls, the performance of Others was significantly better than ST. Within categories, there was no significant difference in achievement of boys and girls.

Reading Comprehension

The data reveals that achievement of students, both boys and girls, of Others category was better than SC followed by ST category and differences in achievement across the categories were significant in all cases except between girls of ST and SC categories. In ST category, girls performed significantly better than boys.

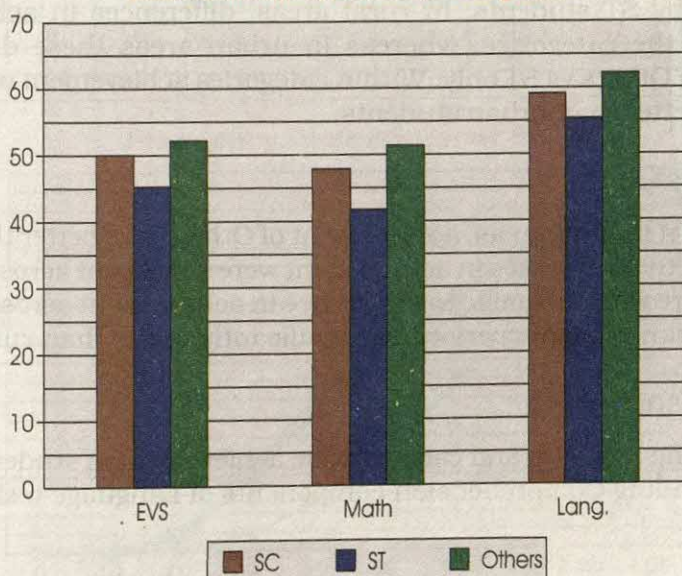
Areawise and Categorywise Achievement

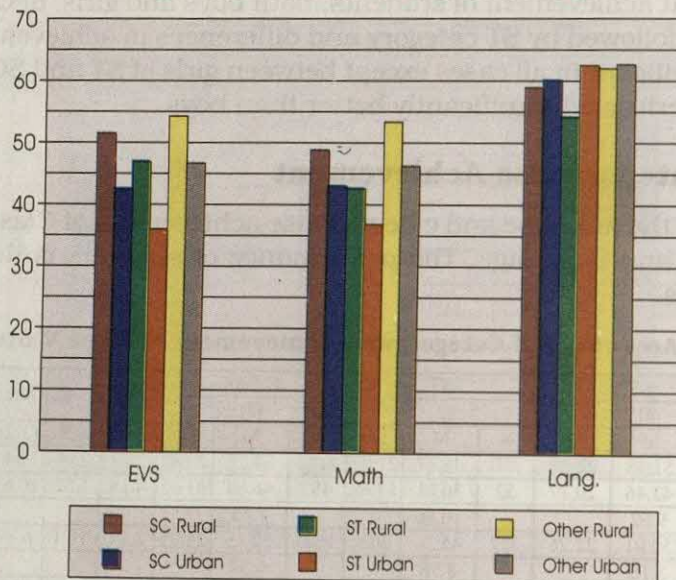
Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	320	51.48	22.38	300	46.87	21.03	1171	54.27	20.82	2.79	2.01	7.4	5.45	-4.61	-2.64
	Urban	62	42.46	20.17	52	36.01	17.62	452	46.64	21.02	4.18	1.52	10.63	4.03	-6.45	-1.82
	Diff.		9.02			10.86			7.63							
	Total	382	50.01	22.26	352	45.26	20.9	1623	52.15	21.15	2.14	1.71	6.89	5.59	-4.75	-2.98
	CR Value		3.16			3.98			6.57							
Mathematics	Rural	320	48.81	21.61	300	42.57	17.46	1171	53.37	20.23	4.56	3.39	10.8	9.24	-6.24	-3.97
	Urban	62	42.95	20.22	52	36.84	16.45	452	46.23	21.89	3.28	1.19	9.39	3.75	-6.11	-1.78
	Diff.		5.86			5.73			7.14							
	Total	382	47.86	21.47	352	41.72	17.41	1623	51.38	20.95	3.52	2.9	9.66	9.08	-6.14	-4.27
	CR Value		2.07			2.30			6.01							
Language	Rural	320	58.89	16.99	300	54.12	17.36	1171	61.99	17.01	3.1	2.89	7.87	7.03	-4.77	-3.45
	Urban	62	60.08	17.88	52	62.5	12.91	452	62.63	18.22	2.55	1.05	0.13	0.07	2.42	0.84
	Diff.		-1.19			-8.38			-0.64							
	Total	382	59.08	17.12	352	55.36	17.02	1623	62.17	17.35	3.09	3.17	6.81	6.78	-3.72	-2.95
	CR Value		-0.48			-4.08			-0.65							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise

Environmental Studies

The data reveals that in both rural and urban areas achievement of Others was better than SC followed by ST students. In rural areas, differences in achievement were significant across the categories, whereas in urban areas these differences were significant between Others vs ST only. Within categories achievement of rural students was significantly better than urban students.

Mathematics

The data reveals that in both rural and urban areas achievement of Others was better than SC followed by ST students. In rural areas, differences in achievement were significant across the categories, whereas in urban areas these differences were significant between Others vs ST only. Within categories achievement of rural students was significantly better than urban students.

Language

The data reveals that in rural areas, achievement of Others was better than SC followed by ST students and the differences in achievement were significant across the categories. In urban areas, there was no significant difference in achievement across the categories. In ST category, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
Grammar & Usage	Rural	320	62.92	17.76	300	58.11	18.02	1171	65.32	17.68	2.4	2.14	7.21	6.21	-4.81	-3.34
	Urban	62	63.16	20.19	52	64	14.8	452	65.63	19.2	2.47	0.91	1.63	0.73	0.84	0.26
	Diff.		-0.24			-5.89			-0.31							
	Total	382	62.96	18.15	352	58.98	17.68	1623	65.4	18.11	2.44	2.36	6.42	6.15	-3.98	-3.01
	CR Value		-0.09			-2.56			-0.30							
Reading Comprehension	Rural	320	52.17	20.86	300	47.49	21.85	1171	56.45	21.19	4.28	3.24	8.96	6.38	-4.68	-2.72
	Urban	62	54.95	18.65	52	60	17.16	452	57.63	21.69	2.68	1.04	-2.37	-0.92	5.05	1.5
	Diff.		-2.78			-12.51			-1.18							
	Total	382	52.62	20.52	352	49.34	21.66	1623	56.78	21.33	4.16	3.54	7.44	5.86	-3.28	-2.1
	CR Value		-1.05			-4.65			-0.99							

The data reveals that in rural areas, achievement of Others was better than SC followed by ST students and the differences in achievement were significant across the categories. In urban areas, there was no significant difference in achievement across the categories. In ST category, urban students performed significantly better than rural students.

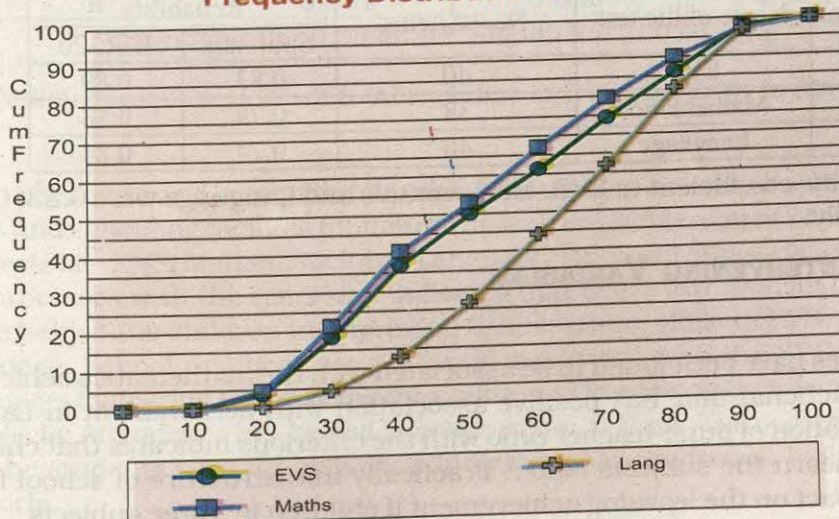
Reading Comprehension

The pattern of achievement of students in Reading Comprehension was exactly similar to that of Grammar and Usage.

DISTRIBUTION OF STUDENTS IN DIFFERENT ABILITY RANGES

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	4	85	343	441	308	267	310	278	281	40
	cf	4	89	432	873	1181	1448	1758	2036	2317	2357
	cf(%)	0.17	3.78	18.33	37.04	50.11	61.43	74.59	86.38	98.30	100
Math	f	3	109	392	455	291	334	296	247	175	55
	cf	3	112	504	959	1250	1584	1880	2127	2302	2357
	cf(%)	0.13	4.75	21.38	40.69	53.03	67.20	79.76	90.24	97.67	100
Language	f	0	11	90	204	326	410	447	445	359	65
	cf	0	11	101	305	631	1041	1488	1933	2292	2357
	cf(%)	0	0.47	4.29	12.94	26.77	44.17	62.13	82.01	97.24	100

Frequency Distribution of Students

The figures posted in Table 23 reveals that in EVS and Mathematics, the distribution of scores covered the entire range from 0-100 per cent. In Language, there was no student in the range of 0-10 per cent. The maximum number of cases in EVS (441), in Mathematics (455) and in Language (447) were in the range 30-40 per cent, 30-40 per cent and 60-70 per cent respectively. Further, 49.89% students in EVS, 46.97% in Mathematics and 73.23% in Language scored more than 50% marks, whereas 38.57% in EVS, 38.80% in Mathematics and 55.83% in Language scored more than 60% marks.

CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	0	0
25 to less than 50	Difficult	18	10	20
50 to less than 75	Average	20	22	18
75 to 100	Very Easy	1	8	0

No items in any subject was found very difficult. About 45% items in EVS, 50% in Language and 25% in Mathematics were difficult. However, nearly 50% items in each subject belonged to the category of average.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	3	1	3
.30 to less than .70	Average Discrimination	35	34	32
Less than .30	Poor Discrimination	2	5	3

Very few items in each subject had good D.I. i.e., more than 0.70. About 85% items in all subject had average value of D.I. However, in each subject very few items were very easy, hence these were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.83	0.89
2	Mathematics	38	0.79	0.88
3	Language	40	0.74	0.84

The reliability co-efficient in EVS, Mathematics and Language were 0.83, 0.79 and 0.74 respectively.

IMPACT OF INTERVENING VARIABLES

School

Physical facilities have been found to be associated with the mathematics achievement. Likewise instructional time has positive association with achievement in Language. Negative association of pupil-teacher ratio with the criterions indicates that children in smaller group learn the subjects better. Practically infrastructure of school facilities has limited impact on the learning achievement if children in three subjects.

Table 27: Regression and Correlation Co-efficients of Predictors of School related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	66.231	--	67.712	--	78.978	--
PTR	-0.168*	-0.176*	-0.141*	-0.082*	-0.129*	-0.154*
Com_Participation	0.349	0.051	0.184	0.022	0.141	0.010
Teach-aid	0.657	0.020	0.149	0.134	0.012	0.012
Physical facility	1.661	0.112	1.768*	0.213**	1.499	0.102
Ancillary facility	0.051	0.008	0.111	0.115	0.087	0.033
Instructional time	0.032	0.022	0.068	0.040	0.012**	0.120**
Working day	0.056	0.070	0.081	0.024	0.039	0.027
Index-Comp. TLM	0.571	0.026	0.024*	0.010	-0.024	-0.003
R²	0.053		0.082		0.089	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 5.3% of total variance in EVS, 8.2% in Mathematics and 8.9% in Language.

Teacher

Teaching aids and Teaching style of teachers contribute towards learning achievement of children in all subjects. The positive association of this variable with the criteria indicates that use of teaching aids like teacher's guides, dictionary, reference books, maps, globes, charts, science and mathematics kit have helped the children in improving their learning skills in environmental sciences Mathematics and language.

Table 28: Regression and Correlation Co-efficients of Predictors of Teacher related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	53.106	--	52.580	--	58.624	--
Index-Qualification	0.042	0.006	0.280	0.010	0.135	0.009
Index-Experience	1.898	0.061	1.366	0.043	0.851	0.035
Index-Teaching Aid	4.024**	0.119**	3.603**	0.106*	1.793*	0.071*
Index-School Org.	0.029	0.023	0.041	0.051	0.026	0.025
R²	0.022		0.020		0.006	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 2.2% of total variance in EVS and 2.0% in Mathematics.

Pupil

Education of parents and occupation, teaching-learning processes adopted by teachers in schools and schooling facilities influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of teaching-learning processes with the criteria indicates that active involvement of teachers in class have helped the children in improving their learning skills in EVS, Mathematics and Language. School practices are positively associated with the EVS, Mathematics and Language, indicating that it helps the children in improving their learning skills in these subjects; Attendance has helped in achievement in Math. The negative association of age of the students with the criteria indicates that children in higher age group scores poorly.

Table 29: Regression and Correlation Co-efficients of Predictors of Pupil-related Variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	66.048	--	59.465	--	75.286	--
Index-Ed & Occu	2.035**	0.074**	2.413**	0.126**	2.732**	0.160**
Index-Schooling	0.065**	0.147**	0.154	0.001	1.808**	0.094**
Index-TLP	14.457**	0.270**	13.843**	0.274**	13.065**	0.279**
Age	-0.907**	-0.147**	-2.166**	-0.160**	-0.945**	-0.097**
Detention	-0.756**	-0.080**	-1.842**	-0.103**	-0.239**	-0.151**
Attendance	0.035	0.086	0.143**	0.136**	0.062	0.022
R²	0.116		0.114		0.124	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 11.6% of total variance in EVS, 11.4% in Mathematics and 12.4% in Language.

One can infer that active involvement of teachers in schools, academic assistance provided by the family members at home, use of teaching aids by teachers in schools, Education and occupation of parents have helped the children in improving their learning skills in the three subjects. Infrastructure of schooling facilities, has limited impact on the children in achievement.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Rajasthan out of 4 districts, Jaipur and Jhunjunu are the two DPEP districts. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Comparison of Achievement between DPEP vs Non-DPEP Districts

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	817	57.73	21.24	495	40.37	16.67	-16.45
	Girls	671	53.99	22.57	374	43.58	17.61	-8.26
	Diff.		3.74			-3.21		
	Total	1488	56.04	21.92	869	41.75	17.15	-17.57
	CR Value		3.27			-2.72		
Mathe- matics	Boys	817	57.68	20.34	495	39.06	16.41	-18.17
	Girls	671	53.38	20.68	374	37.68	15.87	-13.71
	Diff.		4.3			1.38		
	Total	1488	55.74	20.6	869	38.47	16.18	-22.55
	CR Value		4.02			1.25		
Language	Boys	817	65.69	16.22	495	51.13	16.96	-15.32
	Girls	671	64.31	16.47	374	55.68	15.86	-8.32
	Diff.		1.38			-4.55		
	Total	1488	65.07	16.34	869	53.09	16.64	-16.98
	CR Value		1.62			-4.06		

The data reveals that in all the three subjects, the achievement of students of DPEP districts was significantly better than students of non-DPEP districts.

Hard Sport of Learning

In EVS, only question no. 21 is found very difficult, and 18 (45%) items are found difficult. The hard spots were, identification of natural features of the country, boundaries with neighbouring countries, system of governance in India, knowledge of postal services, knowledge of UN days, pre-British rule, farmers' role in freedom struggle, understanding of eclipse, knowledge of composition of air, effect of weather conditions on human bodies, pollution free fuel, knowledge of soil erosion, effects of force, knowledge of plants in deserts, knowledge of parts of human body, conservation of wild animals and knowledge of air carrier of diseases.

No item is found very difficult in Language, however, 10 (25%) items are found difficult. The hard spots were found in comprehension of instructions, time table, informal passage and story.

No item is found very difficult in Mathematics and 20 (50%) items are found difficult. The hard spots were found in number system, commercial mathematics, fraction, decimals, measurement area and geometry.

FINDINGS

Analysis of the results signified that

- Musical instruments were available in approximately 1/3rd schools.
- TV and computer were available in less than 1/10th of schools.
- Pre-schools were attached only to primary and upper primary school.
- Competency-based textbooks, workbooks, teachers' handbooks and teaching aids were available for few schools till year 2001.
- Students were getting maximum benefit under free textbooks scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 225.
- Nearly 93% schools in rural areas were having Village Education Committees.
- AEC, SMC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was higher in rural schools than urban schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Not a single teacher was qualified below Class X.
- More degree holder male teachers studied Mathematics, Science than female teachers.
- About half of teachers had B.Ed professional qualification
- Majority of teaching aids were available to 85% teachers.
- In general, teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET and minimum by Teacher Resource Centre.
- Maximum in-service training programmes were conducted on 'Competency-based Teaching-learning and minimum on 'Use of Instructional Material'; during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by majority of teachers.
- Approximately, 61% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Majority of fathers were skilled worker and mothers were housewives in urban areas.
- In most of cases, teachers were getting assistance from 'Head of Schools'.
- For approximately 86% students, medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father than other family members.
- Girls were getting more academic assistance from family members than boys in rural

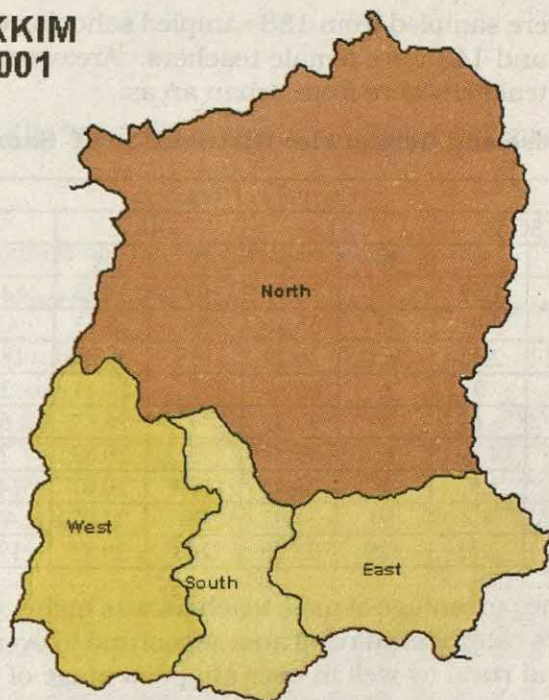
areas.

- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general educational qualification of mothers was poorer than fathers.
- Approximately, 87% students were attending schools above 70% working days.
- Approximately, less than 4% students were attending schools below 60% of the total working days.
- Performance of rural students was significantly better than urban students in EVS and Mathematics.
- Performance of other category students were significantly better than SC and ST students in Mathematics and Language.
- Performance of boys were significantly better than girls in Mathematics only.
- Performance of students from DPEP districts was significantly better than non-DPEP districts students in all three subjects.
- Infrastructure facilities available in school did not help much in improving their learning achievement in the three subjects.
- Active involvement of teachers in school and family members at home and use of teaching aids by teachers help the children in improving their learning achievement in the three subjects.
- Students of higher age group scored poorly in all three subjects.
- Detained student performed bad as compared other student.

INTRODUCTION

Historically, Sikkim was hereditary monarchy before its merger to the mainstream of India and became the 22nd state of India in 1975. Stating back to the post merger educational scenario of Sikkim, it is of the record that the increase in number of schools is not significant. It may be noted that since after the merger the Government of Sikkim is striving hard to expand the educational facilities to all spheres of life. There are 4 districts in the state.

**SIKKIM
2001**



Sikkim's educational vision is well thought of, which one can clearly visualise as every school has pre-primary classes attached to the primary section. As per the Census 2001, the state has the literacy rate of 69.68% for male. It is 76.73% and 61.46% for female. The state has 501 primary schools and over 77,003 pupils were enrolled in Classes I-V from 2001-2002. The Gross Enrolment Ratio for the state is 98 girls per 100 boys.

Sample

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 158 schools were sampled from East Sikkim, North Sikkim, West Sikkim and Gyalshing(W) districts of Sikkim. Out of total sampled schools, 38 schools were from East Sikkim, 41 from North Sikkim, 40 from West Sikkim and remaining 39 from Gyalshing(W).

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	150	149	99.33	1	0.67	0	0
Urban	8	8	100	0	0	0	0
Total	158	157	99.37	1	0.63	0	0

Teachers

A total of 469 teachers were sampled from 158 sampled schools. Out of 469 teachers, 326 were male teachers and 143 were female teachers. Areawise, 445 teachers were from rural areas and 24 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	5	1.58	72	22.71	99	31.23	141	44.48	317
	Female	5	3.91	45	35.16	36	28.13	42	32.81	128
	Total	10	2.25	117	26.29	135	30.34	183	41.12	445
Urban	Male	0	0	6	66.67	1	11.11	2	22.22	9
	Female	1	6.67	5	33.33	4	26.67	5	33.33	15
	Total	1	4.17	11	45.83	5	20.83	7	29.17	24
Total	Male	5	1.53	78	23.93	100	30.67	143	43.87	326
	Female	6	4.2	50	34.97	40	27.97	47	32.87	143
	Total	11	2.35	128	27.29	140	29.85	190	40.51	469

Table 2 shows that the percentage of male teachers was higher than female teachers in case of OBC and Others categories in rural area school and in overall. In the remaining categories and urban and rural as well in over all, percentage of female teachers was more than male teachers.

Students

A total number of 2,451 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
East Sikkim	Rural	274	350	624
	Urban	72	54	126
	Total	346	404	750
North Sikkim	Rural	223	232	455
	Urban	28	29	57
	Total	251	261	512
South Sikkim	Rural	257	323	580
	Urban			
	Total	257	323	580
Gyalshing (W)	Rural	289	320	609
	Urban			
	Total	289	320	609
Total	Rural	1043	1225	2268
	Urban	100	83	183
	Total	1143	1308	2451

Out of 2,451 students, 2,268 were from rural areas and remaining 183 students were from urban areas. Out of the total sample, 1,143 were boys and 1,308 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	138	92	72	48	42	28	27	18	9	6
Urban	6	75	3	37.5	1	12.5	2	25	2	25
Total	144	91.14	75	47.47	43	27.22	29	18.35	11	6.96

Out of 158 sampled schools, pre-primary school attached with 144 (91.14%) schools, 75 (47.47%) in primary, 43 (27.22%) in elementary, 29 (18.35%) in secondary and 11(6.96%) in senior secondary schools.

Facilities related to teaching-learning process

It was observed that maps, charts and game equipment were available in 82% to 89% schools. Magazines, journals and newspapers were available only in 13% schools. Play material and toys, reference books, dictionaries, encyclopedia were available in 70% to 78% schools. Further, mini tool kit was available in 39% schools. Primary science kit was available in 57% schools. Besides, maths kit and children's books were available to 65% to 68% schools.

Infrastructural facilities

It was observed that chairs for teachers, chalk and duster, school bell, blackboard were available in 90% and more schools, whereas, tables for teachers was available in 84% schools. Water pitcher, ladel and glasses were available in 28% schools. Musical instrument were available in 35% to 39% schools. Besides, play ground, pin-up board/ notice board were available in 71% schools. Further, dustbins were available in 57% schools.

Ancillary Facilities

Computer was available in only 2% schools. TV was available in only 9% schools. Separate toilet for girls and first aid kit facilities were available in only 22% schools. Annual medical check-up for children and immunisation facilities were available in 85% and 94% schools respectively. Toilet facilities was available in 61% schools. Electric connection was available in only 15% schools. However, safe drinking water facility was available in 42% schools.

Competency based Teaching Materials

Information gathered shows that out of 158 schools, competency-based textbooks and workbooks approximately same were available in more schools than teachers' handbook and teaching aids. Teachers' handbook and teaching aids were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	1125	1061	2853	3281	4650	4315	2639	2760	11267	11417
	%	9.98	9.29	25.32	28.74	41.27	37.79	23.42	24.17	100	100
Free uniform	N	1141	1084	2797	3191	4656	4268	2680	2825	11274	11368
	%	10.12	9.54	24.81	28.07	41.30	37.54	23.77	24.85	100	100
Free textbooks	N	1194	1116	2946	3133	4856	4486	2755	2870	11751	11605
	%	10.16	9.62	25.07	27.00	41.32	38.66	23.44	24.73	100	100
Scholarship for regular attendance	N	333	320	803	757	565	534	413	424	2114	2035
	%	15.75	15.73	37.98	37.20	26.73	26.24	19.54	20.84	100	100
Other Schemes	N	661	679	1721	1792	1042	946	505	490	3929	3907
	%	16.82	17.38	43.80	45.87	26.52	24.21	12.85	12.54	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. Both boys and girls from OBC category were more benefited from free uniform and free textbooks. However, ST students were more benefitted from others schemes and scholarship for regular attendance.

Instructional Time

Average number of working days in schools was approximately 207 days, schools were having 7 periods in a day of approximately of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of 158 sampled schools, 30(19%) schools were having Village Education Committees (VEC). AEC was observed in 12(7.59%) schools, SMC, 146 (92.41%) and PTA was observed in 52(32.91%) schools. Further VEC and SMC were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	29	1	30
	%	19.33	12.5	18.99
AEC	N	11	1	12
	%	7.33	12.5	7.59
SMC	N	140	6	146
	%	93.33	75	92.41
PTA	N	49	3	52
	%	32.67	37.5	32.91

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	150	621	51.75	579	48.25	1200	8	21
Urban	8	44	36.36	77	63.64	121	15	27
Total	158	665	50.34	656	49.66	1321	8	22

Table 7 shows that overall number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 8 and 15. Further, average teacher-pupil ratio was 1:22, however, this ratio was approximately 1:27 in urban schools.

Educational Qualification

The percentage of female teachers holding degree was more than male teachers. Not a single female teacher was PG degree holder and only 2 male teachers were PG degree holder. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. However, percentage of male and female teachers having sr. secondary level certificate was same. Besides, only 2% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	6	1.84	100	30.67	171	52.45	47	14.42	2	0.61	326
Female	3	2.1	41	28.67	75	52.45	24	16.78	0	0	143
Total	9	1.92	141	30.06	246	52.45	71	15.14	2	0.43	469

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e. Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which Various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	16	4.91	272	83.44	34	10.43	4	1.23	326
	Female	8	5.59	117	81.82	15	10.49	3	2.1	143
	Total	24	5.12	389	82.94	49	10.45	7	1.49	469
Science	Male	10	3.07	251	76.99	55	16.87	10	3.07	326
	Female	8	5.59	108	75.52	25	17.48	2	1.4	143
	Total	18	3.84	359	76.55	80	17.06	12	2.56	469
Language (Medium)	Male	13	3.99	129	39.57	158	48.47	26	7.98	326
	Female	6	4.2	49	34.27	72	50.35	16	11.19	143
	Total	19	4.05	178	37.95	230	49.04	42	8.96	469
Social Science	Male	14	4.29	177	54.29	108	33.13	27	8.28	326
	Female	7	4.9	66	46.15	51	35.66	19	13.29	143
	Total	21	4.48	243	51.81	159	33.9	46	9.81	469

The data reveals that in Mathematics, Language and Social Science the percentage of female teachers who studied these subject upto degree level was more than male teachers. However, this was reverse in case of Mathematics. However, the percentage of teachers who studied Mathematics, Language Science and Social Science upto higher secondary level was nearly same. Besides, the percentage of male teachers who studied Language, Science and Social Science upto Class X was more than female teachers. It was also same for teachers who had studied these subjects below Class X level.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
158	Male	233	4	1
	Female	85	1	0
	Total	318	5	1

The majority of teacher had diploma/certificate in Primary/Elementary Education and only one male teachers was having M.Ed degree. However, only five teachers had B.Ed.

Availability of Teaching Aids

Information gathered indicates that all teaching aids were available to more than 85% teachers in urban schools except others and similarly, these teaching aids were available to more than 89% teachers in rural schools except science kit, mathematics kit and others. Genderwise, all teaching aids such as teachers' guide, dictionary, globe, flash cards, science kit, mathematics kit were more available to female teachers teaching in urban schools than male teachers. Except books other than text books, charts and others. The trend was almost similar in rural areas except for maps, charts and flash cards and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 12.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	0
	%	0
2. Block Resource Centre	N	1
	%	0.21
3. Teacher Resource Centre	N	16
	%	3.41
4. Cluster Resource Centre	N	0
	%	0
5. DIET	N	50
	%	10.66
6. SCERT	N	46
	%	9.81
7. Others	N	22
	%	4.69

The in-service training programme were organised the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Some teachers attended the programme conducted by DIET, SCERT, TRC and Others.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	47
2. Content Enrichment	43
3. Production of Instructional Material	2
4. Use of Instructional Material	4
5. Assessment of Pupil Learning	2
6. Competency based Teaching Learning	22
7. Activity based Joyful Learning	7
8. Others	16

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'General Training' followed by 'Content Enrichment'. Minimum programmes were conducted on 'Production of Instructional Material' and 'Assessment of Pupil Learning'.

Out of 469 sampled teachers, 337(71.86%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 71% and 75% respectively. The percentage of female teachers in rural schools and male teachers in urban schools was more than their counterparts in the respective areas. Besides, not a single male teacher attended any in-service programme in schools from urban areas.

The effectiveness of various training programmes is given in Table 13:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	23	15	21	18
	%	17.42	11.36	15.91	13.64
Average	N	106	111	109	109
	%	80.30	84.09	82.57	82.57
Low	N	3	6	2	5
	%	2.27	4.55	1.52	3.79

It is evident that approximately 80% training programmes were average effective in terms of utility of knowledge gained during training programmes. Only 17% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 82% to 84% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 11% to 16% teachers.

Academic Assistance received from various Sources

Data collected shows that teachers both in rural and urban areas were getting maximum 'ALWAYS' assistance from 'Head of the School' followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes' as compared with 'ALWAYS' and 'NEVER'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 10% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in table 14 Students Profile

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	65	2.65	59	2.41
Illiterate	554	22.60	1306	53.28
Literate	405	16.52	326	13.30
Primary	673	27.46	392	15.99
Secondary	581	23.70	298	12.16
Sr. Secondary	78	3.18	17	0.69
Degree and above	34	1.39	7	0.29
Donot Know/Cannot say	61	2.49	46	1.88

Table 14 indicates that approximately 23% fathers and 53% mothers of the students were illiterate. Approximately, 1% father and less than one percent mother were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	81	13	94	46	5	51
Household/ Housewife	30	0	30	1717	159	1876
Farmer	1111	26	1137	313	2	315
Poultry farming	7	0	7	1	0	1
Agricultural labour	129	3	132	49	1	50
Picking forest produce	4	0	4	0	0	0
Domestic Servent	6	0	6	25	1	26
Street Vender	6	1	7	0	0	0
Manual unskilled worker	64	25	89	18	4	22
Skilled worker	226	25	251	14	0	14
Clerical worker	48	7	55	13	1	14
Shopkeeper	47	16	63	15	5	20
Employer	280	37	317	37	3	40
Manager/Senior Officer	91	2	93	7	0	7
Others	138	28	166	13	2	15

In rural areas majority of mothers were housewives and fathers were farmers. Likewise in urban areas also, majority of mothers were housewives and fathers were employer. Not a single mother was picking forest produces or street vendor. In decreasing order fathers were farmer, employer, skilled worker, others, agricultural labour, manager/senior officer, manual unskilled worker and shopkeeper, etc. In decreasing order mothers were doing household/housewives, farmer, agricultural labour, employer, domestic servant, manual unskilled worker and shopkeeper.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

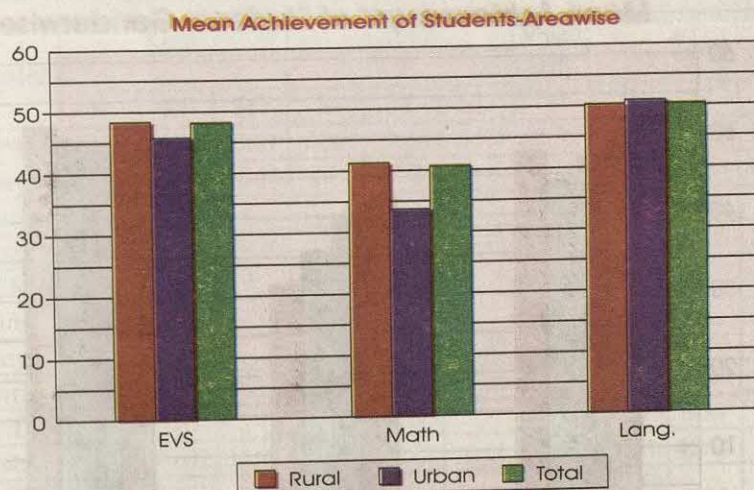
Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	294	354	23	31	317	385
	%	28.19	28.9	23	37.35	27.73	29.43
Mother	N	146	176	10	7	156	183
	%	14	14.37	10	8.43	13.65	13.99
Elder Brother/Sister	N	447	578	41	25	488	603
	%	42.86	47.18	41	30.12	42.69	46.1
Others	N	56	66	2	13	58	79
	%	5.37	5.39	2	15.66	5.07	6.04

Both girls and boys in rural, and boys in urban and also overall students were getting more help from elder brother/sister than any other. However, in rural areas girls were getting more academic assistance than boys but the trend was reverse in urban areas except for help provided by fathers. The descending order of academic assistance provided by the family members was elder brothers and sisters, fathers and mothers for rural students, urban girls and for all students. But trend was different for urban boys.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was less than boys. It was also true for both rural and urban areas. However, the trend in terms of the percentage of boys and girls attending school between 80-90% of working days was in favour of girls. Only 4% percent boys and girls were attending schools less than 60% of total working days. Approximately 88% students were attending school for more than 70% of working days.



Students Achievement

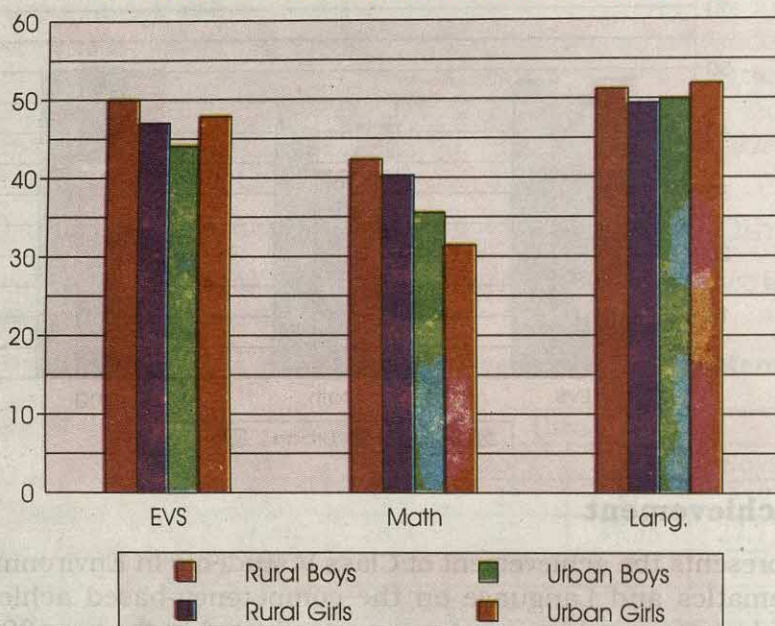
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Sikkim. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Table 17: Genderwise and Areawise achievement of Class V												
Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1043	49.94	16.05	100	44.05	9.43	-5.89	1143	49.42	15.67	-5.53
	Girls	1225	47	16.66	83	47.8	12.34	0.8	1308	47.05	16.41	0.56
	Diff.		2.94			-3.75				2.37		
	Total	2268	48.35	16.44	183	45.75	10.97	-2.6	2451	48.16	16.11	-2.95
	CR Value		4.27			-2.27				3.65		
Mathematics	Boys	1043	42.33	14.99	100	35.53	9.56	-6.8	1143	41.74	14.72	-6.4
	Girls	1225	40.28	15.29	83	31.42	8.07	-8.86	1308	39.72	15.09	-8.97
	Diff.		2.05			4.11				2.02		
	Total	2268	41.22	15.18	183	33.66	9.12	-7.56	2451	40.66	14.95	-10.14
	CR Value		3.22			3.15				3.35		
Language	Boys	1043	51.19	13.73	100	49.92	10.69	-1.27	1143	51.08	13.49	-1.1
	Girls	1225	49.39	12.81	83	51.87	12.02	2.48	1308	49.55	12.77	1.81
	Diff.		1.8			-1.95				1.53		
	Total	2268	50.22	13.27	183	50.81	11.32	0.59	2451	50.26	13.13	0.67
	CR Value		3.21			-1.15				2.87		

Mean Achievement of Students-Genderwise

Environmental Studies

The data given in Table 17 reveals that achievement of boys was significantly better than girls. The performance of boys as well as total students of rural areas was significantly better than their counterparts in urban areas. In rural areas, achievement of boys was significantly better than girls whereas in urban areas girls performed significantly better than boys.

Mathematics

The data reveals that achievement of boys was significantly better than girls. The achievement of students, both boys and girls of rural areas performed significantly better than their urban counterparts. In both rural and urban areas, boys performed significantly better than girls.

Language

The data reveals that there was no significant difference in achievement of students rural and urban students. The achievement of urban boys was significantly better than girls and same was the case in rural areas.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	1043	53.22	15.22	100	51.64	11.74	-1.58	1143	53.08	14.95	-1.25
	Girls	1225	52.32	14.43	83	57.3	14.6	4.98	1308	52.64	14.49	3.01
	Diff.		0.9			-5.66				0.44		
	Total	2268	52.74	14.8	183	54.21	13.38	1.47	2451	52.85	14.71	1.42
	CR Value		1.44			-2.85				0.74		
Compre- hension	Boys	1043	47.81	17.24	100	47.07	15.62	-0.74	1143	47.75	17.1	-0.45
	Girls	1225	44.5	16.57	83	42.81	13.66	-1.69	1308	44.39	16.4	-1.07
	Diff.		3.31			4.26				3.36		
	Total	2268	46.02	16.96	183	45.14	14.88	-0.88	2451	45.96	16.81	-0.76
	CR Value		4.64			1.97				4.95		

The data reveals that achievement of urban girls was significantly better than rural girls. In urban areas, girls performed significantly better than boys.

Reading Comprehension

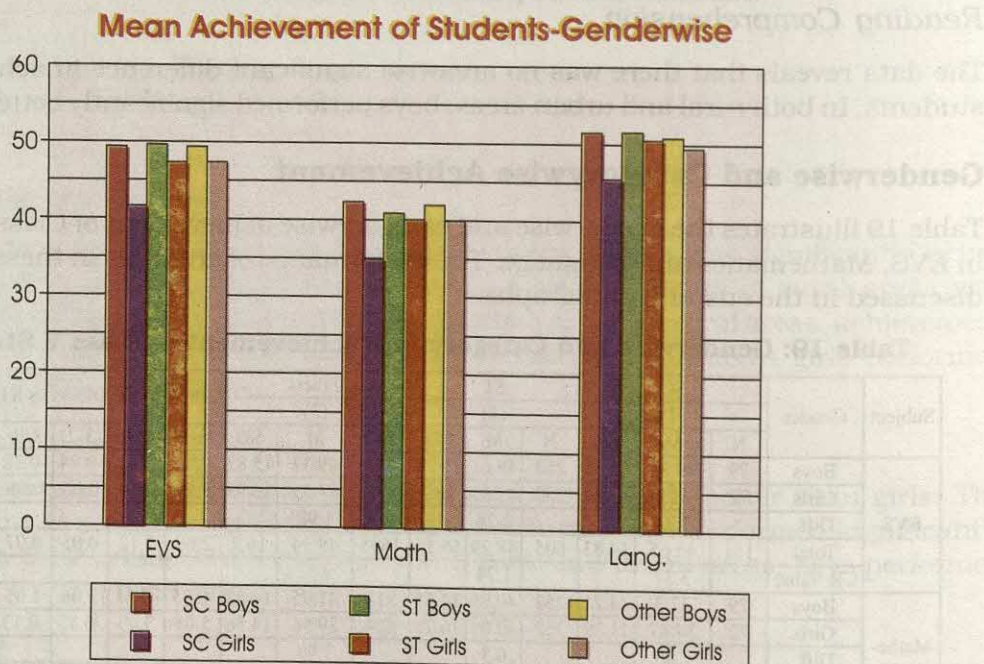
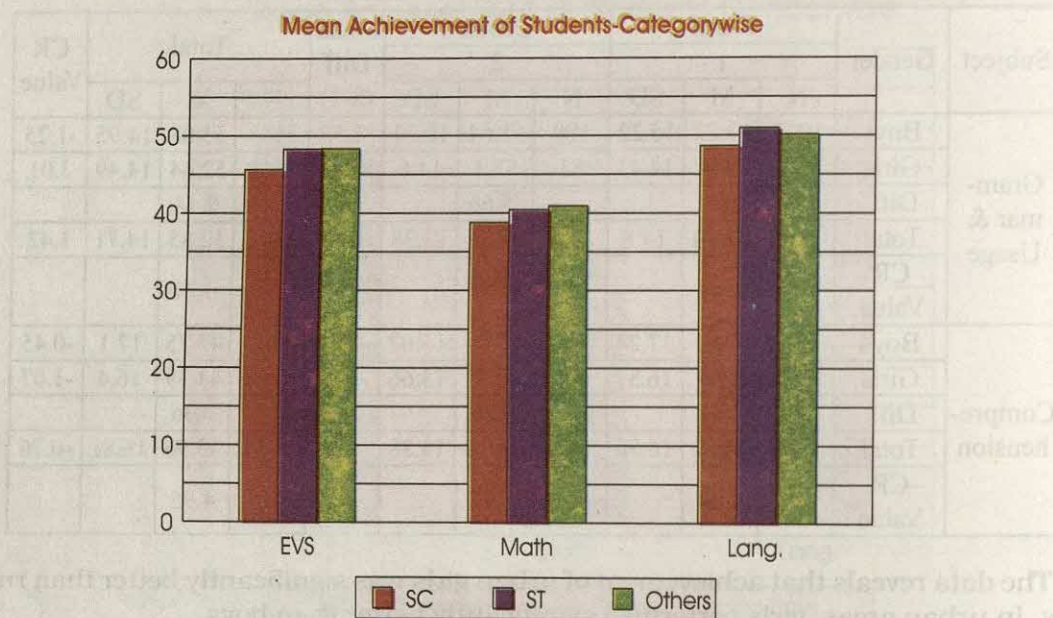
The data reveals that there was no areawise significant difference in achievement of students. In both rural and urban areas, boys performed significantly better than girls.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Boys	79	49.34	15.59	253	49.61	15.28	811	49.37	15.82	0.03	0.02	-0.24	-0.22	0.27	0.14
	Girls	72	41.6	12.89	352	47.33	16.7	884	47.39	16.49	5.79	3.58	0.06	0.06	5.73	3.25
	Diff.		7.74			2.28			1.98							
	Total	151	45.65	14.83	605	48.29	16.15	1695	48.34	16.2	2.69	2.12	0.05	0.07	2.64	1.92
	CR Value		3.37			1.74			2.52							
Mathematics	Boys	79	42.3	14.21	253	40.89	14.55	811	41.95	14.82	-0.35	-0.21	1.06	1.01	-1.41	-0.77
	Girls	72	34.87	11.79	352	40.09	16.78	884	39.96	14.56	5.09	3.45	-0.13	-0.13	5.22	3.16
	Diff.		7.43			0.8			1.99							
	Total	151	38.76	13.59	605	40.42	15.87	1695	40.91	14.72	2.15	1.85	0.49	0.66	1.66	1.3
	CR Value		3.51			0.63			2.79							
Language	Boys	79	51.52	14.88	253	51.58	12.59	811	50.88	13.63	-0.64	-0.37	-0.7	-0.76	0.06	0.03
	Girls	72	45.52	12.28	352	50.55	12.47	884	49.48	12.87	3.96	2.62	-1.07	-1.35	5.03	3.16
	Diff.		6			1.03			1.4							
	Total	151	48.66	13.98	605	50.98	12.52	1695	50.15	13.25	1.49	1.26	-0.83	-1.38	2.32	1.86
	CR Value		2.71			0.98			2.17							



Environmental Studies

The data reveals that differences in achievement of students of Others category was significantly better than SC students. In case of girls, achievement of Others was better than ST followed by SC and the differences in achievement were significant between Others vs SC and ST vs SC. In SC and Others categories, boys performed significantly better than girls.

Mathematics

The data reveals that across the categories, differences in achievement were significant only between girls of Others and SC and ST and SC favouring Others and ST respectively. In SC and Others categories, boys performed significantly better than girls.

Language

The data reveals that across the categories, differences in achievement were significant only between girls of Others and SC and ST and SC favouring Others and ST respectively. In SC and Other categories, boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Gram-mar & Usage	Boys	79	53.72	15.82	253	53.49	13.76	811	52.89	15.23	-0.83	-0.45	-0.6	-0.59	-0.23	-0.12
	Girls	72	49.39	13.16	352	53.26	14.29	884	52.66	14.65	3.27	2.01	-0.6	-0.66	3.87	2.24
	Diff.		4.33			0.23			0.23							
	Total	151	51.66	14.72	605	53.36	14.06	1695	52.77	14.93	1.11	0.89	-0.59	-0.87	1.7	1.28
	CR Value		173			0.20			0.32							
Reading Comprehension	Boys	79	47.85	19.18	253	48.41	16.45	811	47.53	17.1	-0.32	-0.14	-0.88	-0.74	0.56	0.23
	Girls	72	39.07	16.34	352	46.02	16.4	884	44.18	16.32	5.11	2.55	-1.84	-1.78	6.95	3.29
	Diff.		8.78			2.39			3.35							
	Total	151	43.66	18.36	605	47.02	16.45	1695	45.78	16.78	2.12	1.37	-1.24	-1.58	3.36	2.05
	CR Value		3.04			1.77			4.19							

The data reveals that achievement of girls of ST category was better than Others followed by SC girls and the differences in achievement were significant between Other vs SC and ST vs SC. Within categories, there was no significant difference in achievement between boys and girls.

Reading Comprehension

The data reveals that achievement of ST students was significantly better than SC students. In case of girls, differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST respectively. In SC and Others categories, boys performed significantly better than girls.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

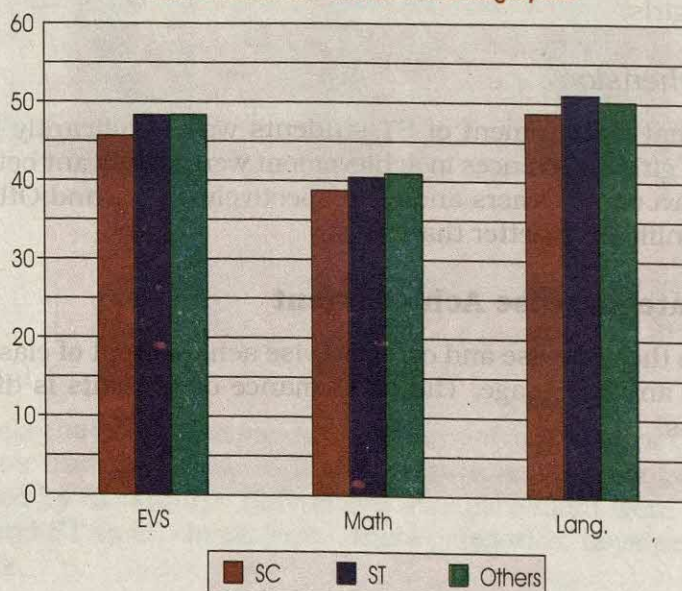
Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Rural	128	45.64	15.19	565	48.58	16.45	1575	48.49	16.53	2.85	2.03	-0.09	-0.11	2.94	1.95
	Urban	23	45.65	12.95	40	44.12	10.23	120	46.31	10.85	0.66	0.23	2.19	1.15	-1.53	-0.49
	Diff.		-0.01			4.46			2.18							
	Total	151	45.65	14.83	605	48.29	16.15	1695	48.34	16.2	2.69	2.12	0.05	0.07	2.64	1.92
	CR Value		0.00			2.54			2.03							
Mathematics	Rural	128	39.84	14.12	565	41.08	16.04	1575	41.39	14.95	1.55	1.19	0.31	0.4	1.24	0.87
	Urban	23	32.72	7.97	40	31.18	9.49	120	34.67	9.1	1.95	1.05	3.49	2.03	-1.54	-0.69
	Diff.		7.12			9.9			6.72							
	Total	151	38.76	13.59	605	40.42	15.87	1695	40.91	14.72	2.15	1.85	0.49	0.66	1.66	1.3
	CR Value		3.43			6.02			7.38							
Language	Rural	128	47.79	14.23	565	50.92	12.62	1575	50.17	13.39	2.38	1.83	-0.75	-1.19	3.13	2.29
	Urban	23	53.48	11.62	40	51.88	11.1	120	49.94	11.32	-3.54	-1.34	-1.94	-0.95	-1.6	-0.53
	Diff.		-5.69			-0.96			0.23							
	Total	151	48.66	13.98	605	50.98	12.52	1695	50.15	13.25	1.49	1.26	-0.83	-1.38	2.32	1.86
	CR Value		-2.08			-0.52			0.21							

Environmental Studies

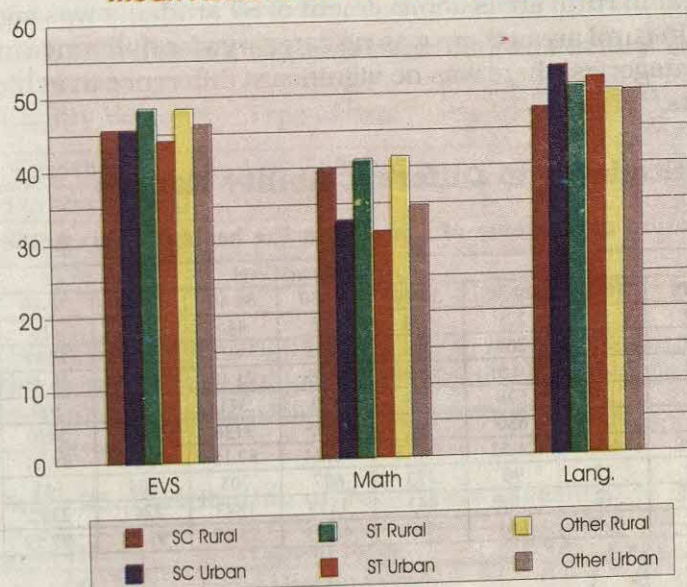
The data reveals that in rural areas, Others performed significantly better than SC students. In urban areas, there was no significant difference in achievement across the categories. In ST and Others categories, rural students performed significantly better than urban students.

Mathematics

The data reveals that in urban areas, differences in achievement were significant only between Others vs ST and favoured Others. In rural areas, there was no significant difference in achievement across the categories. Within categories, rural students performed significantly better than urban students.

Mean Achievement of Students-Categorywise

Mean Achievement of Students-Areawise



Language

The data reveals that across the categories, the differences in achievement were significant only between rural ST and rural SC favouring ST students. In SC category, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise Achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	128	50.62	14.66	565	53.28	14	1575	52.71	15.09	2.09	1.55	-0.57	-0.81	2.66	1.87
	Urban	23	57.39	13.99	40	54.4	14.93	120	53.53	12.73	-3.86	-1.23	-0.87	-0.33	-2.99	-0.8
	Diff.		-6.77			-1.12			-0.82							
	Total	151	51.66	14.72	605	53.36	14.06	1695	52.77	14.93	1.11	0.89	-0.59	-0.87	1.7	1.28
	CR Value		-2.12			-0.47			-0.67							
Reading Comprehension	Rural	128	43.07	18.87	565	46.97	16.6	1575	45.92	16.9	2.85	1.66	-1.05	-1.28	3.9	2.16
	Urban	23	46.96	15.11	40	47.67	14.37	120	43.94	14.98	-3.02	-0.88	-3.73	-1.41	0.71	0.18
	Diff.		-3.89			-0.7			1.98							
	Total	151	43.66	18.36	605	47.02	16.45	1695	45.78	16.78	2.12	1.37	-1.24	-1.58	3.36	2.05
	CR Value		-1.09			-0.29			1.38							

The data reveals that there was no significant difference in achievement of students across the categories. In SC category, urban students performed significantly better than rural students.

Reading Comprehension

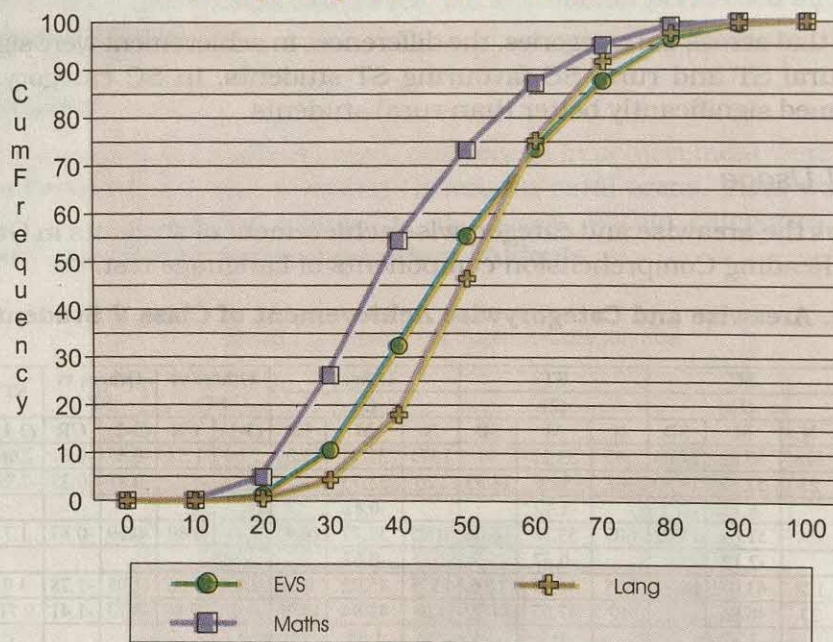
The data reveals that in rural areas achievement of ST students was significantly better than SC students. In rural areas there was no categorywise difference in achievement of students. Within categories, there was no significant difference in achievement of rural and urban students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	0	31	229	534	561	446	347	216	75	12
	cf	0	31	260	794	1355	1801	2148	2364	2439	2451
	cf(%)	0	1.26	10.61	32.39	55.28	73.48	87.64	96.45	99.51	100
Math	f	3	119	528	755	390	341	194	100	20	1
	cf	3	122	650	1405	1795	2136	2330	2430	2450	2451
	cf(%)	0.12	4.98	26.52	54.32	73.24	87.15	95.06	99.14	99.96	100
Language	f	0	12	96	333	697	705	404	145	53	6
	cf	0	12	108	441	1138	1843	2247	2392	2445	2451
	cf(%)	0	0.49	4.41	17.99	46.43	75.19	91.68	97.59	99.76	100

Frequency Distribution of Students



The figures in Table 23 reveals that in Mathematics, the distribution of scores covered the entire range from 0-100 percent. In EVS and Language, none of the students scored in the range 0-10 percent. The maximum number of cases in EVS (561), in Mathematics (755) and in Language (705) were in the range 40-50 percent, 30-40 percent and 50-60 percent, respectively. Further, 44.72% students EVS, 26.76% in Mathematics and 53.57% in Language scored more than 50% marks whereas 26.52% in EVS, 12.85% in Mathematics and 24.81% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	2	2	7
25 to less than 50	Difficult	21	19	20
50 to less than 75	Average	15	16	10
75 to 100	Very Easy	2	3	1

About 5% items in EVS and Language and 17% items in Mathematics were very difficult. About 50% items in each subject were difficult. Nearly 37% items in EVS and Language and 25% items in Mathematics were of average difficulty and also few items in all subject were very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	32	28	26
Less than .30	Poor Discrimination	8	12	12

No item in any subject had good D.I. i.e. more than 0.70. About 70% items in all subject had average value of D.I. However, about 30% items in Language and Mathematics and 20% items in EVS were very easy, hence these were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.71	0.80
2	Mathematics	38	0.64	0.77
3	Language	40	0.57	0.70

The reliability of the test is good.

IMPACT OF INTERVENING VARIABLES

School

Total teaching-time in the school, influences the learning achievement of the children in EVS, Mathematics and Language. The positive association of the variable with these criterions indicates that total teaching time of the school help in improving the learning achievement of children in the three subjects. More working days also help the children in improving their learning achievement in Language.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	15.891	--	16.935	--	22.467	--
PTR	-0.052	-0.061	-0.060	-0.062	-0.066	-0.053
Com Participation	0.061	0.061	0.031	0.080	0.030	0.050
Teach-aid	0.115	0.070	0.141	0.008	0.024	0.006
Physical facility	0.081	0.022	0.161	0.022	0.289	0.084
Ancillary facility	0.075	0.014	0.071	0.066	0.052	0.020
Instructional time	0.038*	0.182*	0.025*	0.041*	0.069*	0.090*
Working day	0.259	0.111	0.256	0.135	0.280*	0.159*
Index-Comp. TLM	0.093	0.010	0.022	0.048	0.913	0.040
R²	0.066		0.039		0.083	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.6% of total variance in EVS, 3.9% variance in Mathematics and 8.3% in Language.

Teacher

Teaching aids and teaching style of teachers influence the learning achievement of children in EVS and Mathematics. The positive association of this variables with the two criteria indicates that use of teaching aids like teacher's guides, dictionary, reference books, maps, science and mathematics kit and giving homework regularly help the children in improving their learning skills in these two subjects. School has also helped the children in improving the learning achievement in all subjects. However, teacher's qualification did not much help in improving their scores.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	45.960	--	38.149	--	47.576	--
Index-Qualification	0.049	0.101	0.914	0.066	0.067	0.035
Index-Experience	0.766	0.012	0.490	0.011	0.524	0.070
Index-Teaching Aid	3.158*	0.152**	2.778*	0.162**	1.476	0.118
Index-School Org.	0.303*	0.110*	0.400*	0.143**	0.320*	0.127**
R²	0.044		0.039		0.029	

*Significant at 0.05 level **Significant at 0.01 level

The set of predictors explain 4.4% of total variance in EVS, 3.9% in mathematics and 2.9% in Language independently.

Pupil

Education and occupation of parents, schooling practices and academic assistance provided by family members, and teaching-learning processes adopted by teachers in school influence learning achievement of children in EVS, Mathematics and Language. The positive association of these variables with the three criteria indicates that active

involvement of teachers in class and family members at home in assigning and checking of homework, removing their difficulties at the appropriate time etc., help the children to some extent in improving their learning achievement in the three subjects. Like-wise detention had negative association with achievement. Age of the children is negatively associated with the criterion, indicating that the children of higher age group scores poorly.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil-related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	50.978	--	42.309	--	57.084	--
Index-Ed & Occu	0.470**	0.054**	0.753**	0.030	0.653	0.041**
Index-Schooling	1.800*	0.067**	2.366**	0.100**	2.199**	0.141**
Index-TLP	1.566*	0.054**	1.971**	0.071**	1.615**	0.031**
Age	-0.484*	-0.053**	-0.424	-0.052	-0.050*	-0.031**
Detention	-0.082**	-0.083**	-0.033	-0.044	-0.022	-0.001**
Attendance	0.052	0.029	0.051	0.032	0.113	0.111
R²	0.022		0.021		0.032	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain only 2.2% of total variance in EVS, 2.1% variance in Mathematics and 3.2% in Language.

One can infer from the above analysis that more teaching time of the school helps in improving the achievement of children in the three subjects. Active involvement of good teaching learning material and school practices help the children in improving their learning achievement in schools in the three subjects.

Hard Spot of Learning

In EVS, items 12 and 18 were found very difficult and 21 (53%) items were found difficult. The hard spots were identification of a state on the map, natural features of the country, understanding a longitude and a latitude, representative of a president in a state, judicial functions of courts, recognition of first president of India, system of governance in India, Gandhiji's strategy for freedom struggle, knowledge of postal services, knowledge of solar system, planets etc, understanding of eclipse, knowledge of pollution free fuel, effects of weather conditions on human bodies, knowledge of pollution free fuel, effects of deforestation, identification of simple machine, effects of force, knowledge of parts of human body, conservation of wild animals and knowledge of carrier of diseases.

In Language, item Nos. 15 and 39 were found very difficult and 10 (49%) items were found difficult. The hard spots were found in structure, vocabulary, spelling, comprehension of instructions, time table, informatinal passage and story.

In Mathematics, items Nos. 23, 25, 26, 27, 29, 34 and 37 were found very difficult, however 20 (52%) items were found difficult. The hard spots were found in number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

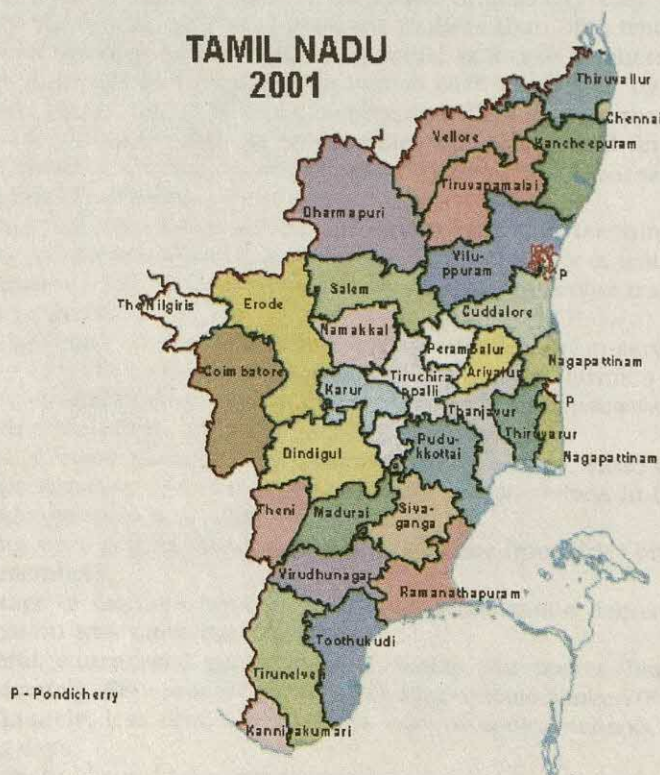
FINDINGS

Analysis of the results signified that:

- Water pitcher, ladel and glasses were available in less than 1/3rd schools.
- TV, was available in very few schools.
- Computer was available in only 2% schools.
- Pre-schools were attached to 91.14% school.
- More Competency-based textbooks were available for primary classes in 2001 as compared with teaching aids workbooks and teachers' Handbooks.
- Competency-based text books, teaching aids, workbooks and handbooks were available in more schools in year 2001 as compared to the year 1998.
- Approximately, 1/3rd students were getting the benefit under each scheme i.e., Mid-day meal free uniform and free textbooks schemes.
- Average number of working days in schools was approximately 207.
- AEC and PTA were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil-teacher ratio was higher in rural schools than urban schools.
- Not a single female teacher was PG degree holder.
- Very few teachers were having educational qualification below Class X level.
- More degree holder female teachers studied Mathematics, Language and Social Science than male teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET and SCERT and none was conducted by School Complex and Cluster Resource Centre.
- Maximum in-service training programmes were conducted on 'General Training' and minimum on 'Production of Instructional Material' and 'Assessment of Pupil Learning' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 72% teachers have not attended any in-service training programme during last three years.
- Not a single male teacher from urban schools attended any in-service training programme.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Majority of fathers were employed and mothers were housewives in urban areas.
- No mother was street vendor or picking forest produces.
- In most of cases teachers were getting assistance from 'Head of Schools'.
- For approximately 1/10th students medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from elder brother/sister than other family members.
- Percentage of mothers having educational qualification degree or higher educational qualification was more than fathers.
- In general, educational qualification of mother was poorer than father.
- Approximately, 88% students were attending schools above 70% working days.
- Approximately, less than 4% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.
- In rural areas, performance of ST students was better than SC student followed by

INTRODUCTION

Tamil Nadu inherited traditional systems of education down from 'gurukula' which gave top priority to education and thus, acclaimed elites, poets and scholars. But from then to present scenario, various educational policies and schemes like UEE, EFA of both central and state government have now shaped the present system. There are 30 districts in the state.



As per the Census 2001, the state has a literacy rate of 73.47%. Whereas for male it is 82.33% and 64.55% for female. The state has now 31,448 primary schools (selected educational statistics, 2001). The pupil-teacher ratio which is 36:1 for the state somehow looks satisfactory. The Gross Enrolment Ratio is 96 girls per 100 boys which defends any gender disparity in the state.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 197 schools were sampled from Chennai, Karur, Tirunelveli and Tiruvanamalai districts of Tamil Nadu. Out of total sampled schools, 48 schools were from Chennai, 49 from Karur, 50 from Tirunelveli and remaining 50 from Tiruvanamalai.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	128	78	60.94	24	18.75	26	20.31
Urban	69	40	57.97	6	8.7	23	33.33
Total	197	118	59.9	30	15.23	49	24.87

Teachers

A total of 341 teachers were sampled from 197 sampled schools. Out of 341 teachers, 136 were male teachers and 205 were female teachers. Areawise, 208 teachers were from rural areas and 133 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	13	14.29	0	0	67	73.63	11	12.09	91
	Female	13	11.11	0	0	82	70.09	22	18.8	117
	Total	26	12.5	0	0	149	71.63	33	15.87	208
Urban	Male	3	6.67	0	0	35	77.78	7	15.56	45
	Female	12	13.64	0	0	56	63.64	20	22.73	88
	Total	15	11.28	0	0	91	68.42	27	20.3	133
Total	Male	16	11.76	0	0	102	75	18	13.24	136
	Female	25	12.2	0	0	138	67.32	42	20.49	205
	Total	41	12.02	0	0	240	70.38	60	17.6	341

Table 2 shows that the percentage of male teachers was higher than female teachers in case of OBC categories whereas, in Others and SC categories percentage of female teachers was higher than male teachers. But in case of SC category, in urban areas percentage of female teachers was more than male teachers and in rural, percentage of male teachers was higher than female teachers. Further, not a single ST teacher the figured in the sample.

Students

A total number of 4,768 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Chennai	Rural	319	356	675
	Urban	276	283	559
	Total	595	639	1234
Karur	Rural	367	357	724
	Urban	146	134	280
	Total	513	491	1004
Tirunelveli	Rural	454	446	900
	Urban	207	156	363
	Total	661	602	1263
Tiruvannamalai	Rural	360	368	728
	Urban	267	272	539
	Total	627	640	1267
Total	Rural	1500	1527	3027
	Urban	896	845	1741
	Total	2396	2372	4768

Out of 4,768 students, 3,027 students were from rural areas and remaining 1,741 students were from urban areas. Out of the total sample, 2,396 were boys and 2,372 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	15	11.72	97	75.78	31	24.22	0	0	0	0
Urban	12	17.39	49	71.01	20	28.99	0	0	0	0
Total	27	13.71	146	74.11	51	25.89	0	0	0	0

Table 4 indicates that out of 197 sampled schools, 27 (13.71%) were in pre-primary, 146 (74.11%) in primary, 51(25.89%) in elementary schools.

Facilities related to teaching-learning process

It was observed that maps, globes, charts and children's books were available in 85% to 90% schools. Magazines, journals and newspaper were available only in 39% schools. Reference books, dictionaries, encyclopedia and maths kit were available in 74% to 76% schools. Mini tool kit was available in 56% schools. Further, game equipment, primary science kit, play material and toys were available in 61% to 65% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chairs and tables for teachers and chalk and duster were available in 91% to 96% schools, whereas, water pitcher, ladel, glasses, and dustbin were available in 70% to 76% schools. Besides, play ground, Pin up board/notice board were available in 64% schools. Further, musical instruments were available in 42% schools.

Ancillary Facilities

Computer and TV were available in 4% and 10% schools. Separate toilet for girls facilities were available in 48% schools. Besides, toilet facilities and first aid kit were available in 68-69% schools. Safe drinking water facility was available in 84% schools. Electric connection in the school was available in 73% cases.

Competency-based Teaching Materials

Information gathered shows that, out of 197 schools, competency-based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Teachers' handbook and teaching aids were available in approximately same number of schools. However, workbooks were available in lesser number of schools as compared with Others.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	6736	6879	425	261	11405	10695	1049	1101	19615	18936
	%	34.34	36.33	2.17	1.38	58.14	56.48	5.35	5.81	100	100
Free uniform	N	6590	6462	417	252	11071	10466	1004	900	19082	18080
	%	34.54	35.74	2.18	1.39	58.02	57.89	5.26	4.98	100	100
Free textbooks	N	7845	7951	772	690	15581	15160	1664	1554	25862	25355
	%	30.33	31.36	2.99	2.72	60.25	59.79	6.43	6.13	100	100
Scholarship for regular attendance	N	192	443	29	27	568	714	2	85	791	1269
	%	24.27	34.91	3.69	2.13	71.81	56.26	0.25	6.70	100	100
Other Schemes	N	557	569	14	21	236	262	1	6	808	858
	%	68.94	66.32	1.73	2.45	29.21	30.54	0.12	0.70	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. In case of all incentive schemes, both boys and girls from SC and OBC categories were more benefited.

Instructional Time

Average number of working days in schools was approximately 219 days. On an average, schools were having 7 periods in a day of approximately of 44 minutes duration.

Educational Committees

The data given in the table 6 reveals that out of 197 sampled schools, 117 (59.39%) schools were having Village Education Committee, 60(30.46%) schools having Area Education Committee, 95(48.22%) schools having School Management Committee and 192(97.46%) schools having Parent Teacher Association. Further, VEC and SMC were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	82	35	117
	%	64.06	50.72	59.39
AEC	N	38	22	60
	%	29.69	31.88	30.46
SMC	N	64	31	95
	%	50	44.93	48.22
PTA	N	124	68	192
	%	96.88	98.55	97.46

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	128	212	27.21	567	72.79	779	6	39
Urban	69	180	23.53	585	76.47	765	11	36
Total	197	392	25.39	1152	74.61	1544	8	38

Table 7 shows that overall number of female teachers were more than male teachers. The average number of teachers per school in rural and urban areas was 6 and 11 respectively. Further, average pupil teacher ratio was 38:1, however, this ratio was 39:1 approximately in rural schools.

Educational Qualification

The percentage of male teachers holding PG degree was more than female teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. However, no teacher was below Class X certificate holder. Besides, 23% teachers were Class X level certificate holder. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	36	26.47	43	31.62	18	13.24	39	28.68	136
Female	0	0	43	20.98	68	33.17	51	24.88	43	20.98	205
Total	0	0	79	23.17	111	32.55	69	20.23	82	24.05	341

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	2	1.47	67	49.26	59	43.38	8	5.88	136
	Female	0	0	111	54.15	81	39.51	13	6.34	205
	Total	2	0.59	178	52.2	140	41.06	21	6.16	341
Science	Male	0	0	65	47.79	66	48.53	5	3.68	136
	Female	0	0	94	45.85	97	47.32	14	6.83	205
	Total	0	0	159	46.63	163	47.8	19	5.57	341
Language (Medium)	Male	0	0	34	25	55	40.44	47	34.56	136
	Female	0	0	45	21.95	80	39.02	80	39.02	205
	Total	0	0	79	23.17	135	39.59	127	37.24	341
Social Science	Male	0	0	71	52.21	37	27.21	28	20.59	136
	Female	1	0.49	119	58.05	47	22.93	38	18.54	205
	Total	1	0.29	190	55.72	84	24.63	66	19.35	341

The data reveals that in Mathematics, Language and Science the percentage of female teachers who studied these subject upto degree level was more than male teachers. However, the trend was reverse in case of Social Science. Similarly, the percentage of male teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level was more than male teachers. This trend was reverse in Science and Language at secondary level.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
197	Male	122	37	17
	Female	185	46	14
	Total	307	83	31

The majority of teachers had diploma/certificate in Primary/Elementary Education and very few teachers were having M.Ed degree. Besides, approximately, 1/5th teachers had B.Ed degree.

Availability of Teaching Aids

Information gathered indicates that all teaching aids were available to more than 85% teachers in urban schools except others. These teaching aids were available to more than 94% teachers in rural schools, except science kit, mathematics kit and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
School Complex	N	14
	%	4.11
Block Resource Centre	N	98
	%	28.74
Teacher Resource Centre	N	17
	%	4.99
Cluster Resource Centre	N	10
	%	2.93
DIET	N	168
	%	49.27
SCERT	N	16
	%	4.69
Others	N	19
	%	5.57

The in-service training programme were organised at various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Maximum teachers were trained by DIET and followed by BRC. However, minimum teachers were trained by CRC.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	43
Content Enrichment	78
Production of Instructional Material	50
Use of Instructional Material	28
Assessment of Pupil Learning	78
Competency based Teaching Learning	93
Activity based Joyful Learning	202
Others	62

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Activity-based Joyful Learning', followed by 'Competency-based Teaching-Learning'. Minimum programmes were conducted on 'Use of Instructional Material'.

Out of 341 sampled teachers, 41(12.02%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was approximately 9% and 14%. This percentage was 10% and 14% for rural and 8% and 14% for urban male and female teachers. However, percentage of female teachers in rural schools and urban schools was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	251	236	241	238
	%	83.67	78.67	80.34	79.34
Average	N	46	59	52	56
	%	15.33	19.67	17.33	18.67
Low	N	3	5	7	6
	%	1.00	1.67	2.33	2

It is evident that approximately 15% training programmes were average effective in terms of utility of knowledge gained during training programmes. However, 84% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 17% to 20% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 79-80% teachers.

Academic Assistance received from various Sources

Data collected indicates that teachers both in rural and urban areas were getting maximum 'ALWAYS' assistance from 'Head of the School' followed by 'Other teachers of the School' and from other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 92% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	222	4.66	182	3.82
Illiterate	651	13.65	1368	28.69
Literate	412	8.64	465	9.75
Primary	1469	30.80	1469	30.81
Secondary	1483	31.10	999	20.95
Sr. Secondary	298	6.29	118	2.47
Degree and above	76	1.59	15	0.31
Donot Know/Cannot say	157	3.29	152	3.18

Table 14 indicates that approximately 14% father and 29% mother of the students were illiterate. Only approximately 2% fathers and less than 1% mothers were having degree or higher educational qualifications. Further, approximately half of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	430	161	591	301	89	390
Household/ Housewife	1034	814	1848	33	51	84
Farmer	252	50	302	475	97	572
Poultry farming	1	1	2	13	1	14
Agricultural labour	445	164	609	485	232	717
Picking forest produce	28	10	38	37	6	43
Domestic Servent	187	202	389	24	34	58
Street Vender	16	13	29	65	50	115
Manual unskilled worker	104	67	171	340	110	450
Skilled worker	215	136	351	666	604	1270
Clerical worker	3	4	7	15	24	39
Shopkeeper	34	24	58	155	157	312
Employer	24	0	24	62	24	86
Manager/Senior Officer	15	14	29	34	50	84
Others	239	81	320	322	212	534

In both rural and urban areas majority of mothers were skilled worker and fathers were doing household activities. Only few mothers and fathers were Manager/Senior Officers. Number of Manager/Senior Officers mothers was more than fathers in urban areas. In decreasing order, fathers were working as household activities, agricultural labour, domestic servant, skilled worker, other work, farmer, manual unskilled worker and domestic servant. In decreasing order, mothers were working as skilled worker, agricultural labour, farmer, other worker manual unskilled worker, and street vendor/ employer etc.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	311	337	323	327	634	664
	%	20.73	22.07	36.05	38.7	26.46	27.99
Mother	N	185	196	240	246	425	442
	%	12.33	12.84	26.79	29.11	17.74	18.63
Elder Brother/Sister	N	353	381	230	256	583	637
	%	23.53	24.95	25.67	30.3	24.33	26.85
Others	N	105	94	78	104	183	198
	%	7	6.16	8.71	12.31	7.64	8.35

Both girls and boys in urban areas were getting more help from father/guardian than any other. In rural areas, both boys and girls were getting more academic assistance from elder brother/sister. The descending order of academic assistance provided by the family members was father, elder brother and sisters and mothers in case of all students. Overall, girls were getting more academic assistance than boys.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was less than boys. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was 30% and 34% respectively. Only 4% percent boys and girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

Students Achievement

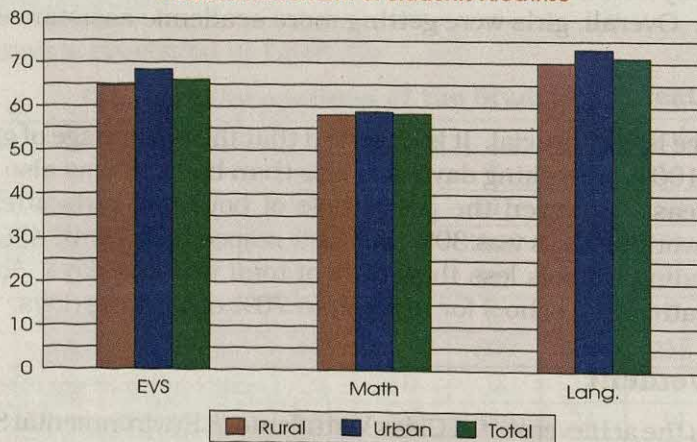
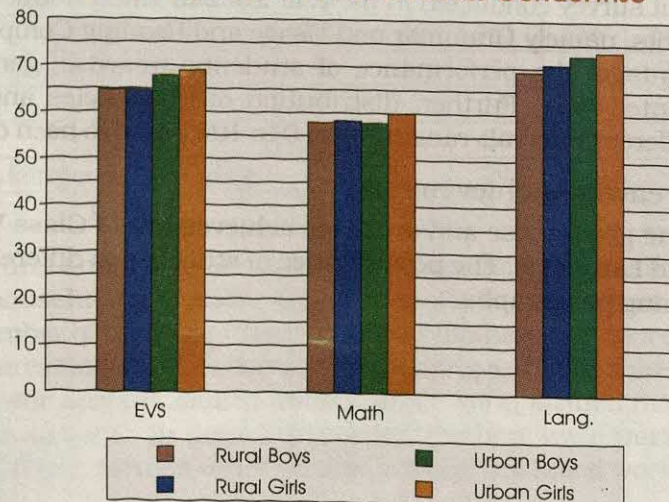
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Tamil Nadu. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	1500	64.73	19.14	896	67.81	18.11	3.08	2396	65.88	18.82	3.94
	Girls	1527	64.62	18.66	845	68.91	18.21	4.29	2372	66.15	18.61	5.45
	Diff.		0.11			-1.1				-0.27		
	Total	3027	64.67	18.9	1741	68.34	18.16	3.67	4768	66.01	18.71	6.62
	CR Value		0.16			-1.26				-0.5		
Mathe- matics	Boys	1500	57.89	23.42	896	57.85	21.94	-0.04	2396	57.87	22.87	-0.04
	Girls	1527	58.31	22.71	845	59.91	22.77	1.6	2372	58.88	22.74	1.64
	Diff.		-0.42			-2.06				-1.01		
	Total	3027	58.1	23.06	1741	58.85	22.36	0.75	4768	58.37	22.81	1.1
	CR Value		-0.5			-1.92				-1.53		
Langu- age	Boys	1500	69.16	17.65	896	72.68	17.74	3.52	2396	70.48	17.76	4.71
	Girls	1527	70.76	16.75	845	73.44	17.92	2.68	2372	71.71	17.22	3.57
	Diff.		-1.6			-0.76				-1.23		
	Total	3027	69.97	17.22	1741	73.05	17.83	3.08	4768	71.09	17.5	5.81
	CR Value		-2.56			-0.89				-2.43		

Mean Achievement of Students-Areawise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data given in Table 17 reveals that achievement of urban students, both boys and girls was significantly better than their rural counterparts. Within areas, there was no significant difference in achievement between boys and girls.

Mathematics

In Mathematics, there was no significant difference in achievement of students, both boys and girls, across the areas and within areas.

Language

The data reveals that achievement of students, both boys and girls, of urban areas was significantly better than their rural counterparts. The achievement of girls was significantly better than boys. In rural areas, girls performed significantly better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	1500	72.83	18.33	896	75.81	17.55	2.98	2396	73.95	18.09	3.95
	Girls	1527	74.12	17.52	845	76.01	18.23	1.89	2372	74.79	17.79	2.45
	Diff.		-1.29			-0.2				-0.84		
	Total	3027	73.48	17.93	1741	75.91	17.87	2.43	4768	74.37	17.95	4.52
	CR Value		-1.98			-0.23				-1.62		
Compre- hension	Boys	1500	63.05	21.48	896	67.46	21.85	4.41	2396	64.7	21.72	4.81
	Girls	1527	65.16	20.18	845	69.15	21.81	3.99	2372	66.58	20.86	4.38
	Diff.		-2.11			-1.69				-1.88		
	Total	3027	64.11	20.85	1741	68.28	21.84	4.17	4768	65.64	21.31	6.45
	CR Value		-2.78			-1.61				-3.05		

The data reveals that achievement of students, both boys and girls, of urban areas was significantly better than their rural counterparts. The achievement of girls was significantly better than boys. In rural areas, girls performed significantly better than boys.

Reading Comprehension

The data reveals that achievement of students, both boys and girls, of urban areas was significantly better than their rural counterparts. The achievement of girls was significantly better than boys. In rural areas, girls performed significantly better than boys.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

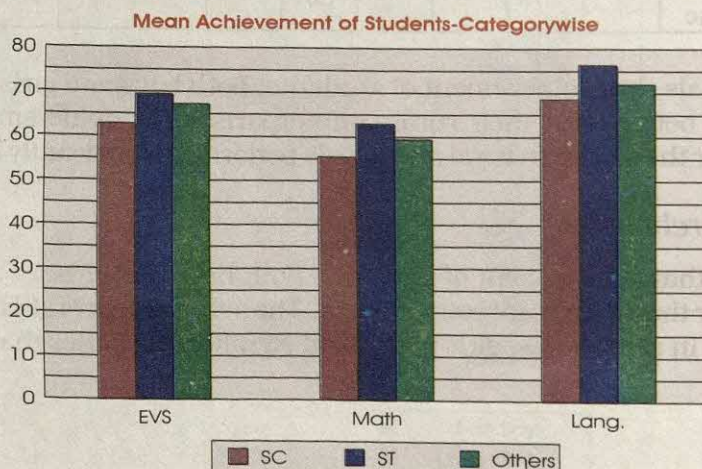
Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	664	63.03	19.33	52	67.88	19.95	1680	66.95	18.46	3.92	4.48	-0.93	-0.33	4.85	1.69
	Girls	682	62.5	19.17	48	71.09	17.94	1642	67.52	18.19	5.02	5.83	-3.57	-1.36	8.59	3.19
	Diff.		0.53			-3.21			-0.57							
	Total	1346	62.76	19.24	100	69.42	18.98	3322	67.23	18.33	4.47	7.29	-2.19	-1.14	6.66	3.38
	CR Value		0.56			-0.85			-0.90							
Mathematics	Boys	664	55.96	24.28	52	63.41	19.45	1680	58.46	22.34	2.5	2.3	-4.95	-1.8	7.45	2.61
	Girls	682	54.97	24.08	48	62.45	18.23	1642	60.4	22.09	5.43	5.07	-2.05	-0.76	7.48	2.68
	Diff.		0.99			0.96			-1.94							
	Total	1346	55.46	24.18	100	62.95	18.78	3322	59.42	22.23	3.96	5.19	-3.53	-1.84	7.49	3.76
	CR Value		0.75			0.26			-2.52							
Language	Boys	664	68.61	18.65	52	75	16.96	1680	71.08	17.37	2.47	2.95	-3.92	-1.64	6.39	2.6
	Girls	682	68.53	18.46	48	77.81	15.93	1642	72.86	16.53	4.33	5.31	-4.95	-2.12	9.28	3.86
	Diff.		0.08			-2.81			-1.78							
	Total	1346	68.57	18.54	100	76.35	16.45	3322	71.96	16.98	3.39	5.8	-4.39	-2.63	7.78	4.52
	CR Value		-2.33			0.18			-5.78							

Environmental Studies

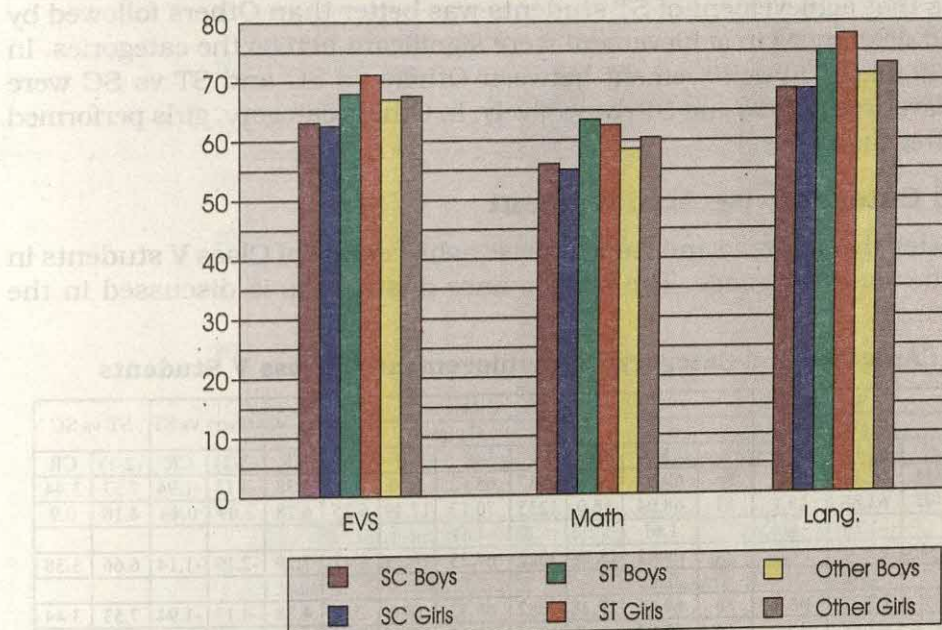
The data reveals that achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs SC and ST vs SC. The boys of Others category performed significantly better than SC boys. In case of girls, the differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST respectively. Within categories, there was no significant difference in achievement between boys and girls.

Mathematics

The data reveals that achievement of students, both boys and girls of ST category was better than their counterparts in Others followed by SC and the differences in achievement were significant between Others vs SC and ST vs SC. In Others category, girls performed significantly better than boys.



Mean Achievement of Students-Genderwise



Language

The data reveals that achievement of students, both boys and girls, of ST category was better than their counterparts in Others followed by SC category and the differences in achievement across the categories were significant in all cases except between boys of Others and ST categories. In Others category, girls performed significantly better than boys.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
Grammar & Usage	Boys	664	71.67	19.45	52	78.54	16.84	1680	74.7	17.48	3.03	3.49	-3.84	-1.62	6.87	2.8
	Girls	682	71.02	19.53	48	81.08	15.74	1642	76.18	16.82	5.16	6.03	-4.9	-2.12	10.06	4.21
	Diff.		0.65			-2.54			-1.48							
	Total	1346	71.34	19.49	100	79.76	16.29	3322	75.43	17.17	4.09	6.72	-4.33	-2.61	8.42	4.91
	CR Value		0.61			-0.78			-2.49							
Reading Comprehension	Boys	664	63.52	21.98	52	69.1	23.51	1680	65.03	21.54	1.51	1.51	-4.07	-1.23	5.58	1.66
	Girls	682	64.37	21.86	48	72.36	21.3	1642	67.33	20.34	2.96	3.03	-5.03	-1.61	7.99	2.51
	Diff.		-0.85			-3.26			-2.3							
	Total	1346	63.95	21.92	100	70.67	22.42	3322	66.17	20.98	2.22	3.17	-4.5	-1.98	6.72	2.9
	CR Value		0.71			-0.73			-3.17							

The data reveals that achievement of students, both boys and girls, of ST category was better than their counterparts in Others followed by SC category and the differences in achievement across the categories were significant in all cases except between boys of Others and ST categories. In Others category, girls performed significantly better than boys.

Reading Comprehension

The data reveals that achievement of ST students was better than Others followed by SC students and differences in achievement were significant across the categories. In case of girls, differences in achievement between Others vs SC and ST vs SC were significant and favoured Others and ST respectively. In Others category, girls performed significantly better than boys.

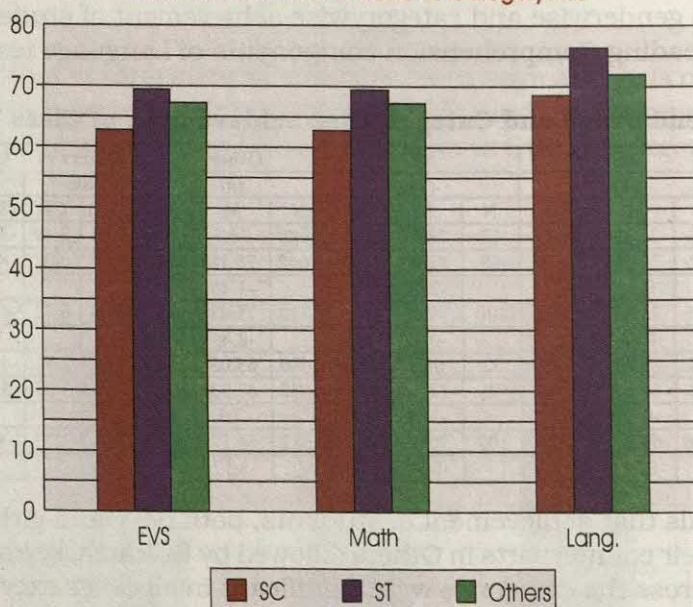
Areawise and Categorywise Achievement

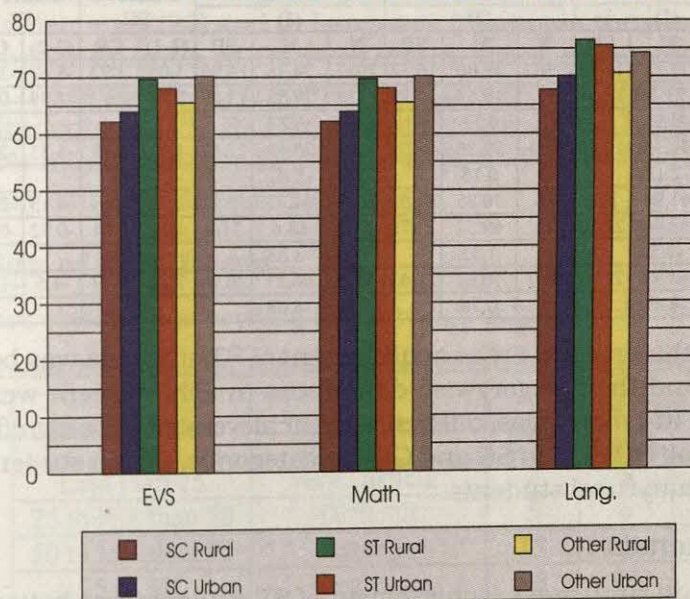
Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	854	62.12	19.31	86	69.65	19.38	2087	65.52	18.6	3.4	4.38	-4.13	-1.94	7.53	3.44
	Urban	492	63.88	19.1	14	68.04	16.9	1235	70.13	17.49	6.25	6.28	2.09	0.46	4.16	0.9
	Diff.		-1.76			1.61			-4.61							
	Total	1346	62.76	19.24	100	69.42	18.98	3322	67.23	18.33	4.47	7.29	-2.19	-1.14	6.66	3.38
	CR Value		-1.62			0.32			-7.17							
Mathematics	Rural	854	62.12	19.31	86	69.65	19.38	2087	65.52	18.6	3.4	4.38	-4.13	-1.94	7.53	3.44
	Urban	492	63.88	19.1	14	68.04	16.9	1235	70.13	17.49	6.25	6.28	2.09	0.46	4.16	0.9
	Diff.		-1.76			1.61			-4.61							
	Total	1346	62.76	19.24	100	69.42	18.98	3322	67.23	18.33	4.47	7.29	-2.19	-1.14	6.66	3.38
	CR Value		1.23			0.59			-2.40							
Language	Rural	854	67.69	18.87	86	76.48	16.19	2087	70.63	16.42	2.94	3.98	-5.85	-3.28	8.79	4.72
	Urban	492	70.1	17.88	14	75.54	18.64	1235	74.2	17.67	4.1	4.32	-1.34	-0.27	5.44	1.08
	Diff.		-2.41			0.94			-3.57							
	Total	1346	68.57	18.54	100	76.35	16.45	3322	71.96	16.98	3.39	5.8	-4.39	-2.63	7.78	4.52
	CR Value		-2.33			0.18			-5.78							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise

Environmental Studies

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs SC and ST vs SC. In urban areas, Others performed significantly better than SC students. In Others category, urban students performed significantly better than rural students.

Mathematics

The data reveals that in rural areas achievement of ST students was better than SC followed by Others and the categorywise differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC favouring Others. In Others category, urban students performed significantly better than rural students.

Language

The data reveals that in rural areas achievement of ST students was better than SC followed by Others and the category-wise differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC favouring Others. In SC and Others categories, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	854	71.13	19.95	86	79.86	16.37	2087	74.18	16.98	3.05	3.92	-5.68	-3.15	8.73	4.61
	Urban	492	71.7	18.68	14	79.14	16.39	1235	77.55	17.29	5.85	6	-1.59	-0.36	7.44	1.67
	Diff.		-0.57			0.72			-3.37							
	Total	1346	71.34	19.49	100	79.76	16.29	3322	75.43	17.17	4.09	6.72	-4.33	-2.61	8.42	4.91
	CR Value		-2.12			0.15			-5.47							
Reading Comprehension	Rural	854	61.94	21.9	86	70.85	21.62	2087	64.72	20.29	2.78	3.19	-6.13	-2.58	8.91	3.64
	Urban	492	67.44	21.53	14	69.52	27.76	1235	68.6	21.9	1.16	1.01	-0.92	-0.12	2.08	0.28
	Diff.		-5.5			1.33			-3.88							
	Total	1346	63.95	21.92	100	70.67	22.42	3322	66.17	20.98	2.22	3.17	-4.5	-1.98	6.72	2.9
	CR Value		-4.49			0.18			-5.08							

The data reveals that in rural areas achievement of ST students was better than SC followed by Others and the categorywise differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC favouring Others. In SC and Others categories, urban students performed significantly better than rural students.

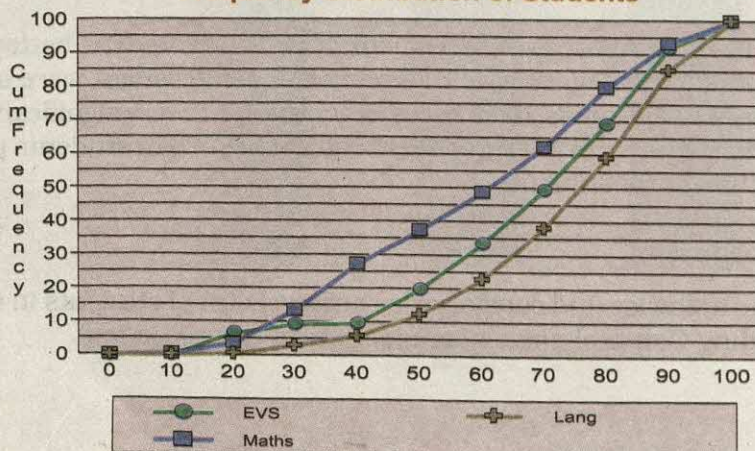
Reading Comprehension

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and the differences in achievement were significant across the categories. In SC and Others categories, urban students performed significantly better than rural students.

Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	8	28	124	305	488	653	761	935	1076	390
	cf	8	36	160	465	953	1606	2367	3302	4378	4768
	cf(%)	0.17	6.76	9.36	9.75	19.99	33.68	49.64	69.25	91.82	100
Math	f	20	154	468	660	479	545	639	847	631	325
	cf	20	174	642	1302	1781	2326	2965	3812	4443	4768
	cf(%)	0.42	3.65	13.46	27.31	37.35	48.78	62.19	79.95	93.18	100
Language	f	3	22	75	182	307	504	730	997	1244	704
	cf	3	25	100	282	589	1093	1823	2820	4064	4768
	cf(%)	0.06	0.52	3.00	5.91	12.35	22.92	38.23	59.14	85.23	100

Frequency Distribution of Students

The data presented in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 percent. The least number of cases in EVS (8), in Mathematics (20) and in Language (3) were in the range 0-10 percent. The maximum number of cases in EVS (1076), in Mathematics (847) and in Language (1244) were in the range 80-90 percent, 70-80 percent and 80-90 percent respectively. The 80.01% students in EVS, 62.65% in Mathematics and 87.65% in Language scored more than 50% marks whereas 66.32% in EVS, 51.22% in Mathematics and 78.08% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	2	0	0
25 to less than 50	Difficult	5	6	13
50 to less than 75	Average	17	14	20
75 to 100	Very Easy	16	20	5

No item in Language and Mathematics and 5% items in EVS was found very difficult. About 13% items in EVS and Language and 32% items in Mathematics were difficult. 42% items in EVS, 35% in Language and 52% in Mathematics belonged to the category of average. Nearly 40% in EVS, 50% in Language and 13% items in Mathematics were very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of Item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	4	0	5
.30 to less than .70	Average Discrimination	30	33	33
Less than .30	Poor Discrimination	6	7	0

No item in Language and about 10% items in EVS and 13% in Mathematics had good D.I. i.e. more than 0.70. About 75% items in each subject had average value of D.I. However, no item in Mathematics and 15% items in EVS and 17% item in Language were very easy, hence these were very poorly discrimination.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of Items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.85	0.88
2	Mathematics	38	0.82	0.91
3	Language	40	0.77	0.87

The co-efficient of reliability of three tests is alright.

IMPACT OF INTERVENING VARIABLES

School

Competency based teaching-learning material, teaching aids, and physical facilities in school influence the learning achievement of children in three subjects, EVS, Mathematics and Language. As such contribution of school in variable improving the learning achievement of children seems to be very limited.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	98.022	--	98.424	--	96.756	--
PTR	-0.045	-0.042	-0.045	-0.052	-0.194	-0.076
Com Participation	0.932	0.104	0.627	0.133	0.476	0.001
Teach-aid	0.743	0.171	0.681*	0.266**	0.433*	0.221**
Physical facility	1.830*	0.172*	1.477	0.080	0.979*	0.236**
Ancillary facility	0.072	0.003	0.191	0.003	0.427	0.170*
Instructional time	0.022	0.074	0.085	0.036	0.047	0.049
Working day	0.042	0.012	0.071	0.084*	0.010	0.014
Index-Comp. TLM	2.778*	0.146*	3.511*	0.173*	2.008*	0.161**
R²	0.136		0.093		0.048	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 13.6% variance in EVS, 9.3% in Mathematics and 4.3% in Language.

Teacher

Teaching experience and training of teachers and help from school organisation to the teachers-influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. Teaching experience at primary stage and utility of the knowledge gained through training programmes and help received from their senior colleagues in the organisation have helped the teachers in improving the learning achievement of children in the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	58.499	--	46.681	--	62.964	--
Index- Qualification	0.534	0.044	1.031	0.053	0.021	0.005
Index-Experience	3.472*	0.124*	4.791*	0.131*	5.674**	0.223**
Index-Teaching Aid	1.352	0.075	1.677	0.072	0.456	0.007
Index-School Org.	0.585*	0.146**	0.650*	0.130*	0.617**	0.153**
R²	0.038		0.036		0.075	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 3.8% of variance in EVS, 3.6% in Mathematics and 7.5% in Language.

Pupil

Teaching-learning processes adopted by teachers in school, school practices and academic assistance provided by the family members, and parents education and occupation influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these three variables indicates that active involvement of teachers in class and family members at home enhance the learning achievement of students in all the three subjects. The negative association of age with the criterions reveals that children of higher age group scores poorly and vice-versa. The average age of children (10.45 years) indicates that some children, may be from disadvantage groups, take admission in school at late age or may be repeaters.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	69.700	--	58.302	--	70.710	--
Index-Ed & Occu	1.202*	0.031**	1.232	0.076	0.409*	0.031*
Index-Schooling	2.022*	0.060**	2.040	0.121**	1.814	0.091
Index-TLP	5.302*	0.123**	5.421**	0.154**	4.808**	0.149**
Age	-0.402*	-0.063	-0.372	-0.030	-0.084**	-0.087**
Detention	-0.121**	-0.023**	-0.045**	-0.031**	-1.074**	-0.093**
Attendance	0.103	0.010	0.080*	0.080	0.126**	0.079**
R²	0.056		0.065		0.046	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain the 5.6% of total variance in EVS, 6.5% in Mathematics and 4.6% in Language independently.

One can infer from the above analysis that availability of physical facilities and teaching aids in school help the children in improving their learning achievement in the three subjects. Teaching experience at primary stage, utility of knowledge gained through teachers' training programme and help of senior colleagues in the organisation help the teachers in improving the learning achievement of children in the three subjects. Active involvement of teachers in the school and family members at home and attending school regularly by students help the children in improving their learning achievement.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Tamil Nadu out of 4 districts, Thiruvananthapuram is the only DPEP district. The comparative performance of students in DPEP vs non-DPEP district is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	627	79.65	14.52	1769	67.23	17.67	-17.34
	Girls	640	80.06	13.98	1732	68.63	17.29	-16.53
	Diff.		-0.41			-1.4		
	Total	1267	79.86	14.25	3501	67.92	17.49	-23.99
	CR Value		-0.51			-2.37		
Mathe- matics	Boys	627	74.74	15.86	1769	51.89	21.97	-27.83
	Girls	640	75.48	16.71	1732	52.74	21.58	-27.08
	Diff.		-0.74			-0.85		
	Total	1267	75.12	16.29	3501	52.31	21.78	-38.84
	CR Value		-0.81			-1.15		
Language	Boys	627	78.85	13.46	1769	61.29	18.3	-25.39
	Girls	640	79.09	13.56	1732	61.36	17.94	-25.78
	Diff.		-0.24			-0.07		
	Total	1267	78.97	13.5	3501	61.32	18.12	-36.21
	CR Value		-0.32			-0.11		

The data reveals that in all the three subjects, the achievement of students of Thiruvanamalai which was a DPEP district was significantly better than students of non-DPEP districts.

Hard Spot of Learning

In EVS, items 11 and 28 are found very difficult and items 2, 9, 12, 22 and 25 are found difficult. The hard spots found are, identification of natural features of the country, representative of a president in a state, recognition of first president of India, system of governance in India, understanding of eclipse, effect of weather conditions on human bodies and effects of deforestation.

No item is found very difficult in Language, however, items 12, 15, 16, 33, 35 and 39 are found difficult in structure, comprehension of informatical passage and story.

In Mathematics, no item is found very difficult, however, 13 (33%) items are found difficult. The hard spots found are number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

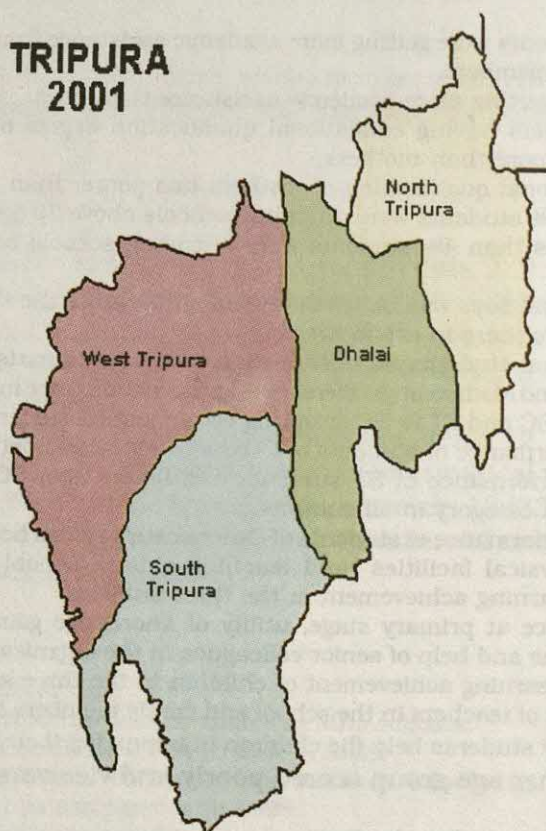
Analysis of the results signified that:

- Mat and furniture for students were available in 29% schools.
- TV and Computer were available in 4% to 10% schools.
- More teaching aids, textbooks, workbooks and teachers' handbooks were available for primary classes in 2001 as compared with 1998.
- More students were getting the benefit under free textbooks scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 219.
- Almost all schools in rural areas were having Parent Teacher Association.
- AEC and PTA were more in terms of percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers.

- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was higher in rural schools than urban schools.
- Percentage of PG degree holder male teachers was more than female teachers.
- Not a single female teacher was passed below Class X.
- More degree holder female teachers studied Mathematics, Language and Science than male teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET and minimum by Cluster Resource Centre.
- Maximum in-service training programmes were conducted on 'Activity-based Joyful Learning' and minimum on 'Use of Instructional Material', during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by majority of teachers.
- Approximately, 12% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- In most of cases teachers were getting assistance always from 'Head of Schools'.
- For approximately 92% students medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members.
- In rural areas students were getting more academic assistance from elder brother/sister than other family members.
- Overall girls were getting more academic assistance than boys.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general educational qualification of mothers was poorer than fathers.
- Approximately, 87% students were attending schools above 70% working days.
- Approximately, less than 4% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS, Language and Mathematics, there was significant difference in students' achievement between others vs SC and ST vs SC favouring others and ST students in all cases.
- In Language, performance of students of Others category was better than SC students.
- In rural areas, performance of ST students was better than SC student followed by students of Others category in all subjects.
- In urban areas, performance of students of Others category was better than SC students.
- Availability of physical facilities and teaching aids in school help the children in improving their learning achievement in the three subjects.
- Teaching experience at primary stage, utility of knowledge gained through teachers' training programme and help of senior colleagues in the organisation help the teachers in improving the learning achievement of children in the three subjects.
- Active involvement of teachers in the school and family members at home and attending school regularly by students help the children in improving their learning achievement.
- Students of higher age group scored poorly and vice-versa.

INTRODUCTION

Tripura, one of the North East hilly states of India, achieved significant growth in education by sharing a common responsibility both by state and central government. For this purpose, the state govt. regularly provides a handsome 16% to 17% of its total budget for school education. There are 4 districts in the state.



As per Census 2001, the state has the literacy rate of 73.66% which is higher than the National Average (for male it was 81.47% and 65.41% for female). The state has an ideal pupil-teacher ratio which is one teacher per 24 students. The Gross Enrolment

Ratio is 90 girls per 100 boys. But the major grievances for the state is the drop out rate which is as high as 50%. In this area the state government need to really work hard for it to realise the goal of SSA.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 163 schools were sampled from Dhalai, North, South and West districts of Tripura. Out of total sampled schools, 19 schools were from Dhalai, 48 from North, 48 from South and remaining 48 from West Tripura.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	139	137	98.56	1	0.72	1	0.72
Urban	24	23	95.83	0	0	1	4.17
Total	163	160	98.16	1	0.61	2	1.23

Teachers

A total of 479 teachers were sampled from 139 sampled schools. Out of 479 teachers, 367 were male teachers and 112 were female teachers. Areawise, 407 teachers were from rural areas and 72 teachers were from urban areas.

Table 2 Categorywise and Genderwise distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	55	16.77	27	8.23	77	23.48	169	51.52	328
	Female	9	11.39	15	18.99	13	16.46	42	53.16	79
	Total	64	15.72	42	10.32	90	22.11	211	51.84	407
Urban	Male	6	15.38	1	2.56	7	17.95	25	64.1	39
	Female	0	0	4	12.12	6	18.18	23	69.7	33
	Total	6	8.33	5	6.94	13	18.06	48	66.67	72
Total	Male	61	16.62	28	7.63	84	22.89	194	52.86	367
	Female	9	8.04	19	16.96	19	16.96	65	58.04	112
	Total	70	14.61	47	9.81	103	21.5	259	54.07	479

Table 2 shows that the percentage of male teachers was higher than female teachers in case of SC and OBC categories. Whereas percentage of female teachers was higher than male teachers in case of ST and Others categories.

Students

A total number of 1,587 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Dhalai Tripura	Rural	94	80	174
	Urban	4	6	10
	Total	98	86	184
North Tripura	Rural	203	202	405
	Urban	38	32	70
	Total	241	234	475
South Tripura	Rural	214	198	412
	Urban	23	37	60
	Total	237	235	472
West Tripura	Rural	176	182	358
	Urban	40	58	98
	Total	216	240	456
Total	Rural	687	662	1349
	Urban	105	133	238
	Total	792	795	1587

Out of 1,587 students, 1,349 were from rural areas and remaining 238 students were from urban areas. Out of the total sample, 792 were boys and 795 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of Terminal Stage of

Area	Pre primary classes Attached.		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	0	0	20	14.39	56	40.29	46	33.09	17	12.23
Urban	0	0	6	25	3	12.5	3	12.5	12	50
Total	0	0	26	15.95	59	36.2	49	30.06	29	17.79

Table 4 indicates that out of 163 sampled schools, 26(15.95%) were primary, 59(36.20%) elementary, 49(30.06%) secondary and 29(17.79%) in senior secondary.

Facilities related to teaching-learning process

It was observed that maps and globes were available in 80% schools. Reference books, dictionaries, encyclopedia, charts, maths kit and play material and toys were available in 50% to 60% schools. Magazines, journals and newspaper and mini tool kit were available only in 15% to 20% schools. Children books and primary science kit were available in 40% to 47% schools. Besides, game equipments were available in 72% schools.

Infrastructural facilities

It was observed that table and chairs for teachers, school bell and blackboard were available in 86% to 88% schools, whereas, play ground and water pitcher, ladel and glasses, were available in 70% to 74% schools. Besides, pin-up board, notice board were available in 45% and 46% schools, respectively. Musical instruments were available in 38% schools. Further, dustbin was available in 29% schools. But chalk and duster was available in 99% schools.

Ancillary Facilities

Computer and TV were available only in 4% schools. Annual medical check-up for children, and immunisation facilities were available in 15% and 14% schools, respectively. Besides, safe drinking water and toilet facilities were available only in 53% to 60% schools. However, separate toilet for girls, electric connection for the schools and first-aid kit were available in 23% to 31% schools.

Competency-based Teaching Materials

Information gathered shows that out of 163 schools, competency-based textbooks and teaching aids were available in more schools than workbooks and teachers' handbook. Workbook and teachers' handbook were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	3754	3287	998	885	3112	2736	5348	5385	13212	12293
	%	28.41	26.74	7.55	7.20	23.55	22.26	40.48	43.81	100	100
Free uniform	N	75	1121	353	760	32	21	90	121	550	2023
	%	13.64	55.41	64.18	37.57	5.82	104	16.36	5.98	100	100
Free textbooks	N	517	575	1321	984	149	152	343	355	2330	2066
	%	22.19	27.83	56.70	47.63	6.39	7.36	14.72	17.18	100	100
Scholarship for regular attendance	N	1011	2280	740	1139	706	631	341	465	2798	4515
	%	36.13	50.50	26.45	25.23	25.23	13.98	12.19	10.30	100	100
Other Schemes	N	1294	1184	410	299	824	679	1114	904	3642	3066
	%	35.53	38.62	11.26	9.75	22.62	22.15	30.59	29.48	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. In case of mid-day meal and other schemes, both boys and girls from SC and others categories were more benefited. However, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls from SC and ST categories.

Instructional Time

Average number of working days in schools were 205 days. Schools were having 6 periods in a day of 41 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of 163 sampled schools, 51(31.29%) schools were having Village Education Committees (VEC). School Management Committee was observed in 127 (77.91%) schools, Area Education Committee was observed in 36(22.09%) schools and Parent Teacher Association was observed in 39(23.93%) schools. Further, VEC and SMC were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	49	2	51
	%	35.25	8.33	31.29
AEC	N	34	2	36
	%	24.46	8.33	22.09
SMC	N	111	16	127
	%	79.86	66.67	77.91
PTA	N	33	6	39
	%	23.74	25	23.93

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	139	984	62.24	597	37.76	1581	11	35
Urban	24	141	39.72	214	60.28	355	15	31
Total	163	1125	58.11	811	41.89	1936	12	35

Table 8 shows that overall the number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 11 and 15. Further, average pupil-teacher ratio was 35:1, however, this ratio was 31:1 approximately in urban schools.

Educational Qualification

The percentage of male teachers holding PG degree was more than female teachers. The trend was same for teachers holding graduation degree. Further, percentage of female teachers who studied upto secondary or sr. secondary level was higher than their male counterparts. Besides, only 1% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	4	1.09	124	33.79	118	32.15	115	31.34	6	1.63	367
Female	2	1.79	45	40.18	38	33.93	26	23.21	1	0.89	112
Total	6	1.25	169	35.28	156	32.57	141	29.44	7	1.46	479

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	49	13.35	225	61.31	56	15.26	37	10.08	367
	Female	21	18.75	81	72.32	9	8.04	1	0.89	112
	Total	70	14.61	306	63.88	65	13.57	38	7.93	479
Science	Male	61	16.62	239	65.12	32	8.72	35	9.54	367
	Female	22	19.64	79	70.54	8	7.14	3	2.68	112
	Total	83	17.33	318	66.39	40	8.35	38	7.93	479
Language (Medium)	Male	14	3.81	163	44.41	120	32.7	70	19.07	367
	Female	2	1.79	51	45.54	38	33.93	21	18.75	112
	Total	16	3.34	214	44.68	158	32.99	91	19	479
Social Science	Male	78	21.25	213	58.04	46	12.53	30	8.17	367
	Female	27	24.11	73	65.18	8	7.14	4	3.57	112
	Total	105	21.92	286	59.71	54	11.27	34	7.1	479

The data reveals that in Mathematics, Science, Language and Social Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. Similarly, the percentage of male teachers who studied Mathematics, Science and Social Science upto higher secondary level was more than female teachers. The trend was reverse for secondary level. Besides, the percentage of female teachers who studied Mathematics, Science and Social Science below Class X was more than male teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
163	Male	211	49	5
	Female	77	17	1
	Total	288	66	6

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few teachers were having M.Ed degree. Besides, 14% teachers were having B.Ed. degree.

Availability of Teaching Aids

Information gathered indicates that all teaching aids were available to more than 85% teachers in urban schools except others, and to more than 88% teachers in rural schools, except science kit, mathematics kit and others. Except books other than text books, the trend was almost similar in rural areas, except for dictionary, maps, charts, flash cards and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
School Complex	N	18
	%	3.76
Block Resource Centre	N	0
	%	0
Teacher Resource Centre	N	1
	%	0.21
Cluster Resource Centre	N	0
	%	0
DIET	N	8
	%	1.67
SCERT	N	3
	%	0.63
Others	N	2
	%	0.42

The in-service training programme were organised by the various institutions in the district during last three years and teachers from both rural and urban areas attended the same. Few teachers attended the programme conducted by School Complex and DIET.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	6
Content Enrichment	5
Production of Instructional Material	2
Use of Instructional Material	4
Assessment of Pupil Learning	16
Competency based Teaching Learning	2
Activity based Joyful Learning	3
Others	5

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Assessment of Pupil Learning followed by 'General Training'. Minimum programmes were conducted on 'Production of Instructional Material' and Competency-based Teaching Learning'.

Out of 479 sampled teachers, 447(93.32%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 93% and 96%, respectively. Approximately 93% teachers in rural areas have not attended any in-service training programme. However, not a single female teacher in urban schools attended any in-service programme.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	18	16	16	17
	%	56.25	50.00	50.00	53.12
Average	N	13	16	14	13
	%	40.63	50.00	43.75	40.63
Low	N	1	0	2	2
	%	3.12	00	6.25	6.25

It is evident that approximately 41% training programmes were average effective in terms of utility of knowledge gained during training programmes. Approximately 56% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as 'Average' by 41% to 50% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 50% to 53% teachers.

Academic Assistance received from Various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance always from 'Head of the School' followed by 'Other teachers of the School'. Least help was provided by DIETs.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 84% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
0. Not Applicable	115	7.25	98	6.17
1. Illiterate	167	10.52	265	16.70
2. Literate	289	18.21	384	24.20
3. Primary	259	16.32	239	15.06
4. Secondary	337	21.24	297	18.71
5. Sr. Secondary	99	6.24	45	2.83
6. Degree and above	116	7.31	54	3.40
7. Do not Know/ Cannot say	205	12.92	205	12.92

Table 14 indicates that approximately 11% father and 17% mother of the students were illiterate. Only 7% father and 3% mother were having degree or higher educational qualifications. Further, approximately 1/3rd of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	90	6	96	93	4	97
Household/ Housewife	54	3	57	1004	172	1176
Farmer	292	8	300	19	0	19
Poultry farming	18	2	20	18	0	18
Agricultural labour	191	8	199	12	0	12
Picking forest produce	24	1	25	18	0	18
Domestic Servent	7	0	7	116	26	142
Street Vender	13	3	16	1	0	1
Manual unskilled worker	116	9	125	18	2	20
Skilled worker	160	30	190	9	0	9
Clerical worker	52	31	83	12	12	24
Shopkeeper	118	25	143	2	0	2
Employer	37	42	79	0	3	3
Manager/Senior Officer	123	62	185	18	19	37
Others	54	8	62	9	0	9

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas, majority of mothers were housewives and fathers were manager/senior officer. In decreasing order fathers were working as farmer, agricultural labour, skilled worker, manager/senior officer, shopkeeper, manual unskilled worker, and others etc. In decreasing order, mothers were working as household/housewives, domestic servant, manager/senior officer, clerical worker, manual unskilled worker, farmer, poultry farming, picking forest produce and agricultural labour.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	397	378	74	93	471	471
	%	57.79	57.1	70.48	69.92	59.47	59.25
Mother	N	360	323	68	88	428	411
	%	52.4	48.79	64.76	66.17	54.04	51.7
Elder Brother/Sister	N	256	285	37	55	293	340
	%	37.26	43.05	35.24	41.35	36.99	42.77
Others	N	114	97	7	21	121	118
	%	16.59	14.65	6.67	15.79	15.28	14.84

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. In rural areas, both girls and boys were getting almost same academic assistance from father. But in urban areas, boys were getting more assistance from father than girls. The descending order of academic assistance provided by the family members was father, mother and elder brother and sisters.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was less than boys. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was 38% and 40%, respectively. Only 8-9% percent boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Tripura. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

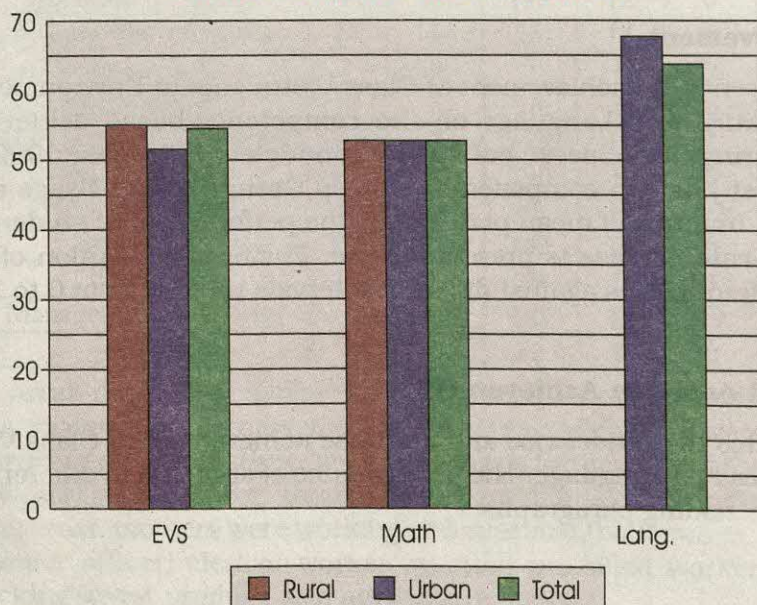
Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	687	55.86	23.41	105	52.19	16.46	-3.67	792	55.38	22.63	-2
	Girls	662	54.16	23.09	133	51.02	19.81	-3.14	795	53.63	22.6	-1.62
	Diff.		1.7			1.17				1.75		
	Total	1349	55.03	23.26	238	51.53	18.38	-3.5	1587	54.5	22.63	-2.59
	CR Value		1.34			0.5				1.54		
Mathematics	Boys	687	53.66	22.45	105	51.91	21.19	-1.75	792	53.43	22.28	-0.78
	Girls	662	51.74	23.65	133	53.3	18.44	1.56	795	52	22.86	0.85
	Diff.		1.92			-1.39				1.43		
	Total	1349	52.72	23.06	238	52.69	19.67	-0.03	1587	52.71	22.58	-0.02
	CR Value		1.53			-0.53				1.26		
Language	Boys	687	62.89	16.5	105	67.02	13.88	4.13	792	63.44	16.23	2.76
	Girls	662	63.32	16.17	133	68.23	12.17	4.91	795	64.14	15.67	4
	Diff.		-0.43			-1.21				-0.7		
	Total	1349	63.1	16.33	238	67.7	12.94	4.6	1587	63.79	15.95	4.85
	CR Value		-0.48			-0.7				-0.87		

Environmental Studies

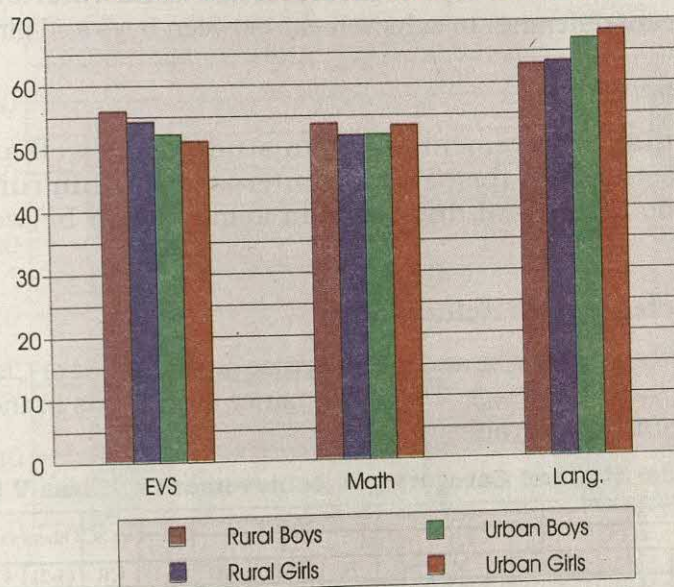
The data given in Table 17 reveals that achievement of rural students as well as rural boys was significantly better than their urban counterparts. Within areas, there was no significant difference in achievement of boys and girls.

Mathematics

The data reveals that there was no significant difference of students, both boys and girls across and within areas.

Mean Achievement of Students-Areawise

Mean Achievement of Students-Genderwise



Language

The data reveals that achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	687	64.63	15.99	105	69.56	13.3	4.93	792	65.28	15.74	3.44
	Girls	662	65.07	16.43	133	69.35	12.39	4.28	795	65.79	15.9	3.42
	Diff.		-0.44			0.21				-0.51		
	Total	1349	64.85	16.21	238	69.45	12.77	4.6	1587	65.53	15.82	4.9
	CR Value		-0.5			0.12				-0.64		
Compre- hension	Boys	687	59.99	21.55	105	62.79	18.39	2.8	792	60.36	21.17	1.42
	Girls	662	60.41	20.35	133	66.37	17.56	5.96	795	61.41	20.03	3.47
	Diff.		-0.42			-3.58				-1.05		
	Total	1349	60.2	20.96	238	64.79	17.98	4.59	1587	60.89	20.61	3.54
	CR Value		-0.37			-1.52				-1.01		

The data reveals that achievement of urban students, both boys and girls was significantly better than their counterparts in rural areas. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Reading Comprehension

The data reveals that achievement of urban students as well as urban girls was significantly better than their rural counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

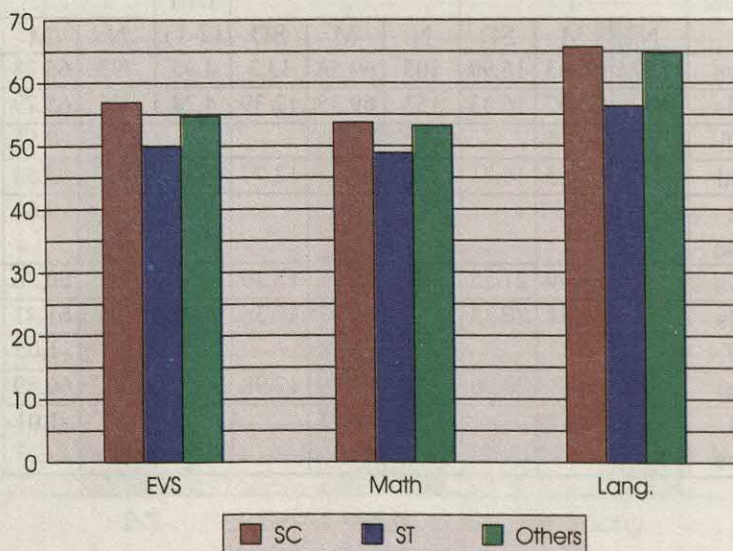
Genderwise and Categorywise Achievement

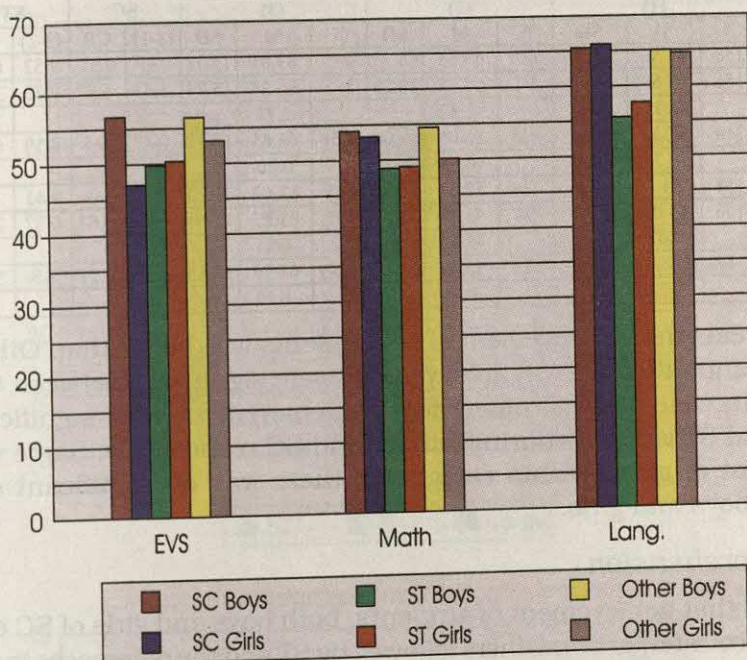
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	158	56.71	22.43	139	49.8	22.69	495	56.52	22.49	-0.19	-0.09	6.72	3.09	-6.91	-2.63
	Girls	156	57.08	21.12	84	50.36	24.62	555	53.16	22.61	-3.92	-2.02	2.8	0.98	-6.72	-2.12
	Diff.		-0.37			-0.56			3.36							
	Total	314	56.89	21.75	223	50.01	23.38	1050	54.74	22.6	-2.15	-1.52	4.73	2.76	-6.88	-3.46
	CR Value		-0.15			-0.17			2.41							
Mathematics	Boys	158	54.11	21.37	139	48.79	21.53	495	54.51	22.65	0.4	0.2	5.72	2.74	-5.32	-2.13
	Girls	156	53.31	21.95	84	49.03	23.33	555	52.09	23.04	-1.22	-0.61	3.06	1.12	-4.28	-1.38
	Diff.		0.8			-0.24			2.42							
	Total	314	53.71	21.63	223	48.88	22.17	1050	53.23	22.88	-0.48	-0.34	4.35	2.65	-4.83	-2.51
	CR Value		0.33			-0.08			1.71							
Language	Boys	158	65.41	14.63	139	55.54	16.24	495	65.03	16.08	-0.38	-0.28	9.49	6.1	-9.87	-5.47
	Girls	156	65.95	14.06	84	57.65	17.76	555	64.62	15.55	-1.33	-1.02	6.97	3.4	-8.3	-3.7
	Diff.		-0.54			-2.11			0.41							
	Total	314	65.68	14.33	223	56.33	16.82	1050	64.81	15.8	-0.87	-0.92	8.48	6.91	-9.35	-6.74
	CR Value		-0.33			-0.89			0.42							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that achievement of SC students was better than Others followed by ST students and differences in achievement were significant between Others vs ST and ST vs SC. In case of boys, differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. In case of girls, these differences were significant between Others vs SC and ST vs SC favouring SC in both cases. In Others category, boys performed significantly better than girls.

Mathematics

The data reveals that achievement of SC students was better than Others followed by ST students and differences in achievement were significant between Others vs ST and ST vs SC. In case of boys, differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC, respectively. Within categories, there was no significant difference in achievement of boys and girls.

Language

The data reveals that achievement of students, both boys and girls of SC category was better than their counterparts in Others followed by ST and the differences in achievement were significant between Others vs ST and ST vs SC. Within categories there was no significant difference in achievement of boys and girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	158	66.56	14.35	139	57.53	16.33	495	67.05	15.37	0.49	0.37	9.52	6.15	-9.03	-5.03
	Girls	156	67.69	14.17	84	58.95	18.28	555	66.28	15.74	-1.41	-1.07	7.33	3.48	-8.74	-3.81
	Diff.		-1.13			-1.42			0.77							
	Total	314	67.12	14.25	223	58.06	17.06	1050	66.65	15.57	-0.47	-0.5	8.59	6.93	-9.06	-6.48
	CR Value		-0.70			-0.58			0.80							
Reading Comprehension	Boys	158	63.5	18.97	139	52.23	21.35	495	61.64	21.27	-1.86	-1.04	9.41	4.6	-11.27	-4.78
	Girls	156	63.03	19.47	84	55.48	22.63	555	61.85	19.64	-1.18	-0.67	6.37	2.44	-7.55	-2.59
	Diff.		0.47			-3.25			-0.21							
	Total	314	63.27	19.19	223	53.45	21.85	1050	61.75	20.42	-1.52	-1.21	8.3	5.21	-9.82	-5.39
	CR Value		0.22			-0.06			-0.17							

The data reveals that achievement of SC students was better than Others followed by ST students and differences in achievement were significant between Others vs ST and ST vs SC. In case of boys, differences in achievement were significant between Others vs ST and ST vs SC favouring Others and SC respectively. Same was the case with achievement of girls. Within categories, there was no significant difference in achievement of boys and girls.

Reading Comprehension

The data reveals that achievement of students, both boys and girls of SC category was better than their counterparts in Others followed by ST and the differences in achievement were significant between Others vs ST and ST vs SC. Within categories there was no significant difference in achievement of boys and girls.

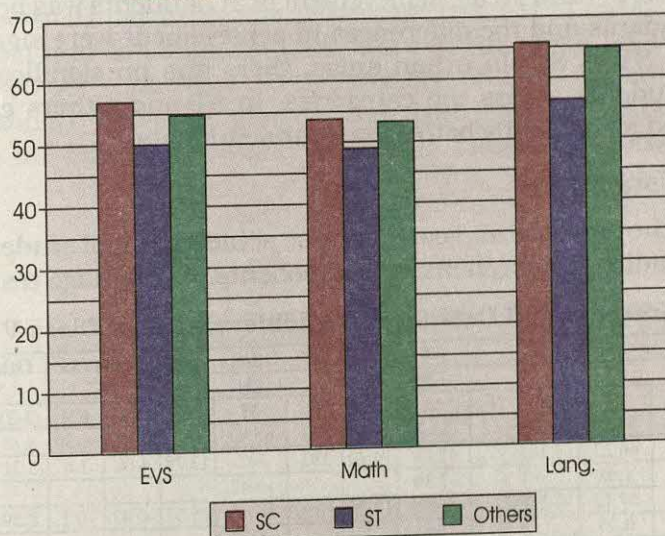
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

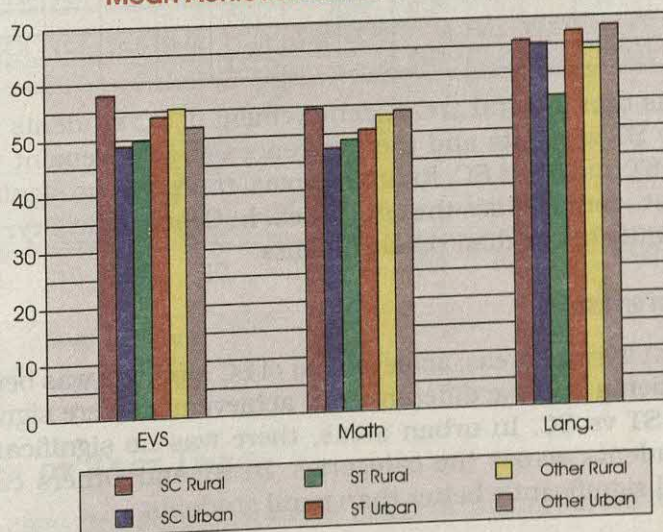
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	278	57.95	22.07	212	49.81	23.43	859	55.37	23.41	-2.58	-1.67	5.56	3.09	-8.14	-3.91
	Urban	36	48.75	17.34	11	53.86	23.22	191	51.92	18.32	3.17	1	-1.94	-0.27	5.11	0.67
	Diff.		9.2			-4.05			3.45							
	Total	314	56.89	21.75	223	50.01	23.38	1050	54.74	22.6	-2.15	-1.52	4.73	2.76	-6.88	-3.46
	CR Value		2.90			-0.56			2.23							
Mathematics	Rural	278	54.54	21.84	212	48.8	22.39	859	53.09	23.52	-1.45	-0.94	4.29	2.47	-5.74	-2.84
	Urban	36	47.3	18.96	11	50.48	18.26	191	53.83	19.79	6.53	1.88	3.35	0.59	3.18	0.5
	Diff.		7.24			-1.68			-0.74							
	Total	314	53.71	21.63	223	48.88	22.17	1050	53.23	22.88	-0.48	-0.34	4.35	2.65	-4.83	-2.51
	CR Value		2.11			-0.30			-0.45							
Language	Rural	278	65.76	14.56	212	55.77	16.79	859	64.05	16.27	-1.71	-1.65	8.28	6.47	-9.99	-6.91
	Urban	36	65.07	12.56	11	67.27	13.85	191	68.22	12.96	3.15	1.37	0.95	0.22	2.2	0.47
	Diff.		0.69			-11.5			-4.17							
	Total	314	65.68	14.33	223	56.33	16.82	1050	64.81	15.8	-0.87	-0.92	8.48	6.91	-9.35	-6.74
	CR Value		0.30			-2.65			-3.83							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, there was no significant difference in achievement of students across the categories. In SC and Others categories, rural students performed significantly better than urban students.

Mathematics

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, there was no significant difference in achievement of students across the categories. In SC category, rural students performed significantly better than urban students.

Language

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, there was no significant difference in achievement of students across the categories. In ST and Others categories urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	278	67.24	14.26	212	57.7	17.14	859	65.83	16.1	-1.41	-1.39	8.13	6.26	-9.54	-6.56
	Urban	36	66.22	14.36	11	65.09	14.32	191	70.3	12.28	4.08	1.6	5.21	1.18	-1.13	-0.23
	Diff.		1.02			-7.39			-4.47							
	Total	314	67.12	14.25	223	58.06	17.06	1050	66.65	15.57	-0.47	-0.5	8.59	6.93	-9.06	-6.48
	CR Value		0.40			-1.65			-4.28							
Reading Comprehension	Rural	278	63.29	19.6	212	52.55	21.67	859	61.09	20.8	-2.2	-1.6	8.54	5.18	-10.74	-5.66
	Urban	36	63.15	15.89	11	70.91	18.2	191	64.75	18.35	1.6	0.54	-6.16	-1.09	7.76	1.27
	Diff.		0.14			-18.36			-3.66							
	Total	314	63.27	19.19	223	53.45	21.85	1050	61.75	20.42	-1.52	-1.21	8.3	5.21	-9.82	-5.39
	CR Value		0.05			-3.23			-2.43							

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, there was no significant difference in achievement of students across the categories. In Others category, urban students performed significantly better than rural students.

Reading Comprehension

The data reveals that in rural areas, achievement of SC students was better than Others followed by ST students and the differences in achievement were significant between Others vs ST and ST vs SC. In urban areas, there was no significant difference in achievement of students across the categories. In ST and Others categories urban students performed significantly better than rural students.

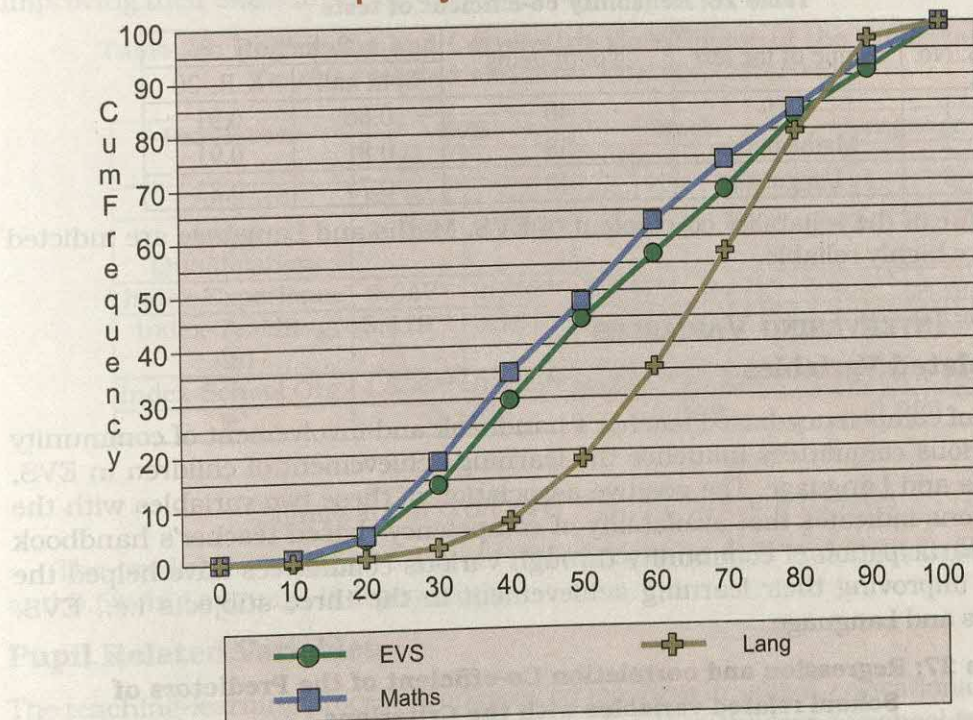
Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	5	61	157	249	238	192	190	216	137	142
	cf	5	66	223	472	710	902	1092	1308	1445	1587
	cf(%)	0.32	4.16	14.05	29.74	44.74	56.84	68.81	82.42	91.05	100
Math	f	12	63	218	261	208	238	181	152	152	102
	cf	12	75	293	554	762	1000	1181	1333	1485	1587
	cf(%)	0.76	4.73	18.46	34.91	48.02	63.01	74.42	83.99	93.57	100
Language	f	0	8	28	76	180	272	343	356	275	49
	cf	0	8	36	112	292	564	907	1263	1538	1587
	cf(%)	0.00	0.50	2.27	7.06	18.40	35.54	57.15	79.58	96.91	100

The figures posted in Table 23 reveals that in EVS and Mathematics the distribution of scores covered the entire range from 0-100 per cent. In language none of the students were in the range 0-10 per cent. The maximum number of cases in EVS (249), in Mathematics (261) and in Language (356) were in the range 30-40 per cent, 30-40 per cent and 70-80 per cent, respectively. Further, 55.26% students in EVS, 51.98% in Mathematics and 81.60% in Language scored more than 50% marks whereas 43.16% in EVS, 36.99% in Mathematics and 64.46% in Language scored more than 60% marks.

Frequency Distribution of Students



CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	1	2
25 to less than 50	Difficult	14	9	13
50 to less than 75	Average	22	15	21
75 to 100	Very Easy	4	15	2

No items from EVS and very few item from Language (one) and Mathematics (two) were found very difficult. But, 35% items from EVS, 23% from Language and 33% from Mathematics belonged to difficult category. Further, most of the items i.e., 55% from EVS, 38% from Language and 55% items from Mathematics were found average difficult. However, 38% items from Language were found very easy.

Table 25: Distribution of Test Items according to DI

Range of Values	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	8	1	5
.30 to less than .70	Average Discrimination	28	27	32
Less than .30	Poor Discrimination	4	12	1

Very few item from Language (1) EVS (8) and Mathematics (05) had good D.I. i.e., more than 0.70. But, most of the items from each category had got average discrimination. Due to 38% easy items in Language 30% items, had found poor discrimination. The reliability of tests is as given below:

Table 26: Reliability co-efficient of tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.86	0.91
2	Mathematics	38	0.81	0.91
3	Language	40	0.75	0.83

High value of the reliability co-efficient of EVS, Maths and Language are indicted that tests are highly reliable.

IMPACT OF INTERVENING VARIABLES

School Related Variables

Availability of competency-based teacher's handbook and involvement of community through various committees influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these two variables with the three criterions indicates that availability of competency- based teacher's handbook and active participation of community through various committees have helped the children in improving their learning achievement in the three subjects i.e., EVS, Mathematics and Language.

Table 27: Regression and correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	23.719	--	32.528	--	46.154	--
PTR	-0.078	-0.099	-0.062	-0.107	-0.012*	-0.038
Com_Participation	3.946*	0.187*	4.876**	0.248**	2.878*	0.208**
Teach-aid	0.410	0.010	0.320	0.012	0.099*	0.068*
Physical facility	0.074	0.020	0.390	0.030	0.610*	0.113**
Ancillary facility	0.031	0.083	0.024	0.073	0.088*	0.045
Instructional time	0.022	0.051	0.022	0.036	0.028*	0.111*
Working day	0.166*	0.129*	0.081*	0.033	0.083*	0.067
Index-Comp. TLM	3.419*	0.152*	4.121*	0.193*	2.11*	0.171*
R²	0.092		0.108		0.098	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 9.2% of total variance in EVS, 10.8% in Mathematics and 9.8% in Language.

Teacher Related Variables

Involvement of school organisation and availability of teaching aids and teaching style of teachers influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of these two variables with the three criteria indicates that help from senior colleagues i.e., head of the institution, senior colleagues, cluster and block resource coordinators, BEO/DEO/AIOS and DIET faculty, teaching aids like teacher's guide, dictionary, reference books, maps, globes, charts, science and Mathematics kits and giving homework have helped the children in improving their skills in all the three subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	45.644	--	45.433	--	60.435	--
Index- Qualification	2.321*	0.136**	1.496*	0.110*	2.024*	0.160**
Index-Experience	5.047*	0.152**	6.543**	0.178*	3.695**	0.161**
Index-Teaching Aid	5.419**	0.181**	5.177**	0.171*	3.756**	0.195**
Index-School Org.	1.396**	0.232**	1.295**	0.223**	0.702**	0.187**
R²	0.101		0.098		0.095	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 10.1% of total variance in EVS and 9.8% in Mathematics and 9.5% in Language independently.

Pupil Related Variables

The teaching-learning processes adopted by teachers in school, educational status and occupation of parents and percentage attendance of children in school influence the learning achievement of children in EVS, Mathematics and Language. The positive association of teaching-learning processes adopted by teachers in school with the three criteria indicates that active involvement of teachers in class help the children in improving their learning skills in the three subjects. The positive association of educational status and occupation of parents and percentage attendance of children with the three criteria indicates that educated parents at home and teachers in class teach the three subjects at same pace. The positive association of attendance with the criteria EVS, Mathematics and Language indicates that children get help in improving their learning achievement

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	74.888	--	63.247	--	75.990	--
Index-Ed & Occu	2.886**	0.073**	2.821**	0.084**	3.992**	0.187**
Index-Schooling	0.150**	0.010	1.356	0.069**	1.108*	0.106**
Index-TLP	4.071**	0.147**	3.067**	0.133**	2.324	0.150**
Age	-0.395	-0.037	-0.289	-0.012	-0.376**	-0.070**
Detention	-0.114**	-0.104**	-0.200	-0.037	-0.92*	-0.043
Attendance	0.082**	0.167**	0.042**	0.171**	0.110**	0.123**
R²	0.066		0.057		0.078	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 6.6% of total variance in EVS, 5.7% in Mathematics and 7.8% in Language.

One can infer from the above analysis that active involvement of teachers in school, availability of competency-based teacher's handbook, active participation of community in schools, help of senior colleagues from school organisation and availability of teaching aids in schools, enhance the learning achievement of students in the three subjects i.e., EVS, Mathematics and Language.

HARD SPOT OF LEARNING

In EVS, no item was found very difficult, however, 14 (35%) items were found difficult. The hard spots which were found are, identification of natural features of the country, boundaries with neighbouring countries, understanding a longitude and a latitude, recognition of first president of India, system of governance in India, knowledge of postal services, knowledge of UN days, knowledge of pre-British rule, knowledge of solar system, planets etc., understanding of eclipse, knowledge of composition of air, identification of simple machine, knowledge of parts of human body and conservation of wild animals.

In Language, only item 36 was found very difficult and 9 (23%) items found difficult. The hard spots were found in, comprehension of instructions and comprehension of story.

In Mathematics, items 29 and 37 were found very difficult and 13(33%) items are found difficult. The hard spots were found in number system, commercial mathematics, fraction, decimals, measurement area and geometry.

FINDINGS

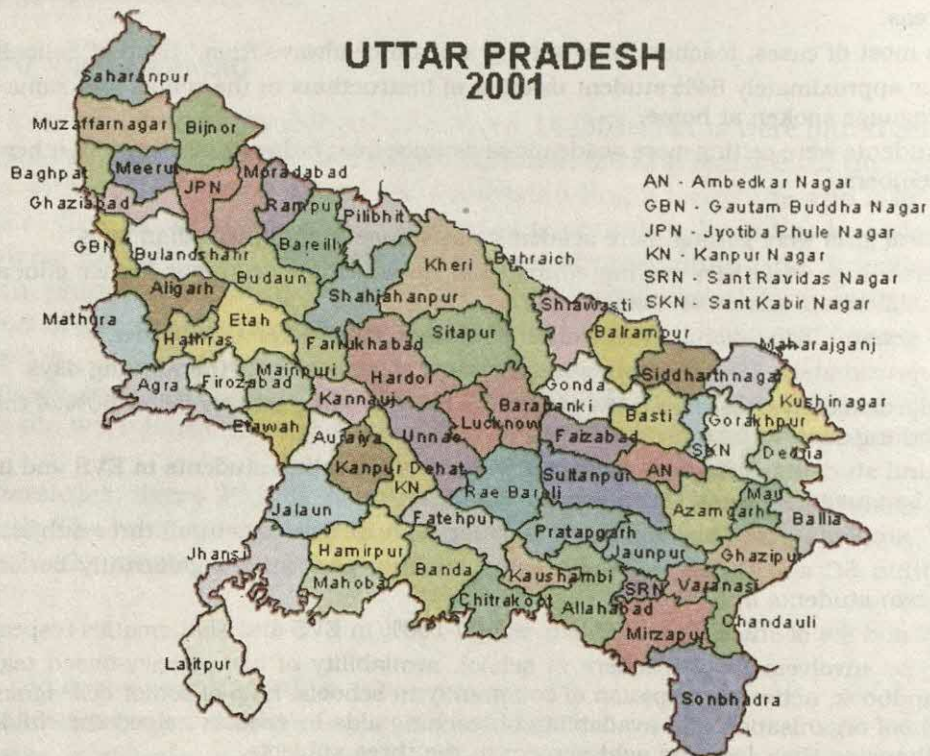
- Chalk and duster were available in 99% schools.
- TV and computer were available in very few schools.
- Textbooks, workbooks and teachers' Handbooks, competency-based textbooks were available in very few schools till year 2001.
- More students were getting the benefit under mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 205.
- AEC and SMC were more in terms of percentage in schools located in rural areas than

schools in urban areas.

- PTAs was more in urban schools than rural schools.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was lower in urban schools than rural schools.
- Percentage of degree holder male teachers was more than female teachers.
- More degree holder male teachers studied Mathematics, Language and Social Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes conducted by BRC and TRC were not in existence at Tripura at the time of survey.
- Maximum in-service training programmes were conducted on 'Assessment of Pupil-learning' and minimum on 'Production of Instructional Material' and 'Competency-based teaching-learning' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by more than half teachers.
- Approximately, 93% teachers have not attended any in-service training programme during last three years.
- Not a single female teacher attended any programme from urban schools.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- More fathers were manager/senior officers and mothers were housewives in urban areas.
- In most of cases, teachers were getting assistance always from 'Head of Schools'.
- For approximately 84% student medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members.
- Rural girls were getting more academic assistance from fathers than boys.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mother.
- In general, educational qualification of mother was poorer than father.
- Approximately, 88% students were attending schools above 70% working days.
- Approximately, less than 8-9% students were attending schools below 60% of the total working days.
- Rural students performed significantly better than urban students in EVS and in case of Language the trend was reverse.
- SC students performed significantly better than ST students in all three subjects.
- Within SC and Others category, rural students performed significantly better than urban students in EVS only.
- 7% and 9% of students scored between 90-100% in EVS and Mathematics respectively.
- Active involvement of teachers in school, availability of competency-based teachers' handbook, active participation of community in schools, help of senior colleagues from school organisation and availability of teaching aids in schools helped the children in enhancing their learning achievement in the three subjects.

INTRODUCTION

Uttar Pradesh is the most populated state in India. Its population is about 166 million and literacy rate, as per Census of India 2001 is 57.36%. Likewise, male literacy rate of the state is 70.30% and female literacy is 48.58%. As per EMIS data, the number of primary schools with Class V was 1,01,758 in 2002-2003. Enrolment of students was 1,83,14,668 in 2003 and 2,51,788 teachers were engaged in primary schools. There are 70 districts in the state.



A primary school is mostly within a distance of 1.5 km from the residence of every child. Mostly primary schools in the state have Classes I to V, whereas some schools have Classes I to VIII and Classes I to X. All schools need to function for 6 hours a day for a minimum of 220 days in academic year. At the primary level students are exposed

to found academic subjects viz. Mother tongue, Mathematics, Science and Social Studies, Sanskrit and Elementary English have been introduced for Classes III to V. A well-planned system to continuous and comprehensive evaluation for Classes I to V in primary schools of the state has been introduced. In this system, evaluation of cognitive as well as non-cognitive domains has been carried out.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented below:

Schools

A total of 349 schools were sampled from Bijnor, Agra, Lakhimpur Kheri, Gorakhpur, Pratapgarh, Chitrakoot and Lucknow districts of Uttar Pradesh. Out of total sampled schools, 50 schools were from each district except from Gorakhpur district wherein 49 schools were taken.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	281	281	100	0	0	0	0
Urban	68	68	100	0	0	0	0
Total	349	349	100	0	0	0	0

Teachers

A total of 560 teachers were sampled from 349 sampled schools. Out of 560 teachers, 380 were male teachers and 180 were female teachers. Areawise, 464 teachers were from rural areas and 96 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	70	20.52	0	0	90	26.39	181	53.08	341
	Female	15	12.2	0	0	23	18.7	85	69.11	123
	Total	84	18.1	0	0	113	24.35	266	57.33	464
Urban	Male	3	7.69	0	0	10	25.64	26	66.67	39
	Female	7	12.28	0	0	7	12.28	43	75.44	57
	Total	10	10.42	0	0	17	17.71	69	71.88	96
Total	Male	73	19.21	0	0	100	26.32	207	54.47	380
	Female	22	12.22	0	0	30	16.67	128	71.11	180
	Total	95	16.97	0	0	130	23.21	335	59.82	560

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except Others.

Students

A total number of 5,098 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Bijnor	Rural	366	345	711
	Urban	45	78	123
	Total	411	423	834
Agra	Rural	390	290	680
	Urban	78	69	147
	Total	468	359	827
Lakhimpur Khiri	Rural	280	221	501
	Urban	98	77	175
	Total	378	298	676
Gorakhpur	Rural	266	261	527
	Urban	58	82	140
	Total	324	343	667
Pratapgarh	Rural	302	317	619
	Urban	62	43	105
	Total	364	360	724
Chitrakoot	Rural	481	309	790
	Urban	22	15	37
	Total	503	324	827
Lucknow	Rural	190	190	380
	Urban	61	102	163
	Total	251	292	543
Total	Rural	2275	1933	4208
	Urban	424	466	890
	Total	2699	2399	5098

Out of 5,098 students, 4,208 students were from rural areas and remaining 890 students were from urban areas. Out of the total sample, 2,699 were boys and 2,399 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	88	31.32	281	100	0	0	0	0	0	0
Urban	4	5.88	68	100	0	0	0	0	0	0
Total	92	26.36	341	100	0	0	0	0	0	0

Table 4 indicates that out of 281 rural sampled schools, pre-schools were attached with only 31.32% schools whereas in urban areas, out of 68 sampled schools, they were attached with only 5 schools. Further, 100% schools in rural areas and 100% schools in urban areas were primary schools. However, no school having elementary, secondary, sr. secondary classes was included in the sample.

Facilities related to Teaching-Learning Process

It was observed that maps and charts were available in 81% and 82% schools respectively. Magazines, journals and newspapers were available only in 13% schools. Reference books, dictionaries, encyclopedias, primary science kits and play materials and toys were available in 55% to 57% schools. Besides, mini-tool kits were available in only 38% schools. Children Books were available in 90% schools, game equipments and maths kits were available in 47-48% schools.

Infrastructural Facilities

It was observed that school bell, water pitcher, ladel and glasses were available in 83% to 85% schools. Blackboard, chalk and duster, table and chairs for teachers were available in 91% to 95% schools. Pin-up board/notice board was available in 42% schools. Besides, play ground were available in 71% schools. However, musical instruments were available in only 23% schools. Further, dustbin was available in 55% schools.

Ancillary Facilities

TV and electric connection for school were available only 3% and 5% schools. Annual medical check-up for children, and immunisation facilities were available in 49% and 40% schools, respectively. Toilet facilities was available in 54% schools. Besides, safe drinking water facility was available in 87% schools. Separate toilet facilities for girls were available in 37% schools. However, computers was available in only 1% schools.

Competency-based Teaching Materials

Information gathered shows that, out of 349 schools, competency-based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Workbook was not available in any school. However, teachers' handbook and teaching aids were available in 234 and 168 schools, respectively.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	7222	7012	144	76	5862	6049	4706	4749	17934	17886
	%	40.27	39.20	0.80	0.42	32.69	33.82	26.24	26.55	100	100
Free uniform	N	118	129	3	4	112	101	153	176	386	410
	%	30.57	31.46	0.78	0.98	29.02	24.63	39.64	42.93	100	100
Free textbooks	N	12959	12675	106	93	10068	9008	7887	8624	31020	30400
	%	41.87	41.69	0.34	0.31	32.41	29.63	25.43	28.37	100	100
Scholarship for regular attendance	N	4355	4312	28	25	595	456	1363	1529	6341	6322
	%	68.68	68.21	0.44	0.40	9.38	7.21	21.50	24.19	100	100
Other Schemes	N	5178	5122	3	9	3034	2623	3553	3723	11768	11477
	%	44.00	44.63	0.03	0.08	25.86	22.85	30.19	32.44	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. In case of mid-day meal and free textbooks to both boys and girls from SC and PBC categories were more benefited. However, free uniform, scholarship for regular attendance and other schemes were available to both boys and girls from SC and Others categories.

Instructional Time

Average number of working days in schools was 216 days. Schools were having 8 periods of 39 minutes duration in a day.

Educational Committees

The data given in the Table 6 reveals that out of 349 sampled schools, Area Education Committee was observed in 283(81.09%) schools, Area Education Committee was observed in 93(26.65%) schools, School Management Committee was observed in 69 (19.77%) schools and Parent Teacher Association was observed in 184 (52.72%) schools. Further, VEC, AEC, SMC and PTA were found more in schools located in urban areas than schools in rural areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	273	10	283
	%	97.15	14.71	81.09
AEC	N	66	27	93
	%	23.49	39.71	26.65
SMC	N	53	16	69
	%	18.86	23.53	19.77
PTA	N	144	40	184
	%	51.25	58.82	52.72

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	281	461	68.09	216	31.91	677	2	62
Urban	68	67	31.9	143	68.1	210	3	51
Total	349	528	59.53	359	40.47	887	3	60

Table 7 shows that overall number of male teachers was more than female teachers. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 2 and 3 respectively. Further, average pupil- teacher ratio was 60:1, however, this ratio was 51:1 for urban schools and 62:1 in rural schools.

Educational Qualification

The percentage of female teachers having PG degree was more than male teachers. This trend was same for teacher holding graduation degree. Further, percentage of female teachers who studied only upto secondary and sr. secondary level was lower than their counterparts. Besides, about 3% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	6	1.58	100	26.32	132	34.74	98	25.79	44	11.58	380
Female	9	5	44	24.44	23	12.78	50	27.78	54	30	180
Total	15	2.68	144	25.71	155	27.68	148	26.43	98	17.5	560

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	27	7.11	307	80.79	37	9.74	9	2.37	380
	Female	127	70.56	40	22.22	11	6.11	2	1.11	180
	Total	154	27.5	347	61.96	48	8.57	11	1.96	560
Science	Male	172	45.26	153	40.26	42	11.05	13	3.42	380
	Female	125	69.44	34	18.89	11	6.11	10	5.56	180
	Total	297	53.04	187	33.39	53	9.46	23	4.11	560
Language (Medium)	Male	11	2.89	118	31.05	164	43.16	87	22.89	380
	Female	11	6.11	55	30.56	42	23.33	72	40	180
	Total	22	3.93	173	30.89	206	36.79	159	28.39	560
Social Science	Male	108	28.42	144	37.89	79	20.79	49	12.89	380
	Female	64	35.56	72	40	19	10.56	25	13.89	180
	Total	172	30.71	216	38.57	98	17.5	74	13.21	560

The data reveals that in Mathematics, Science, Language and Social Science the percentage of male teachers who studied these subject upto degree level was less than female teachers. However, the trend was reverse in case of Sr. Secondary. Similarly, the percentage of male teachers who studied Mathematics, Science and Language upto secondary level was more than female teachers. Besides, the percentage of male teachers who studied Mathematics, Science and Language below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
349	Male	326	31	7
	Female	160	32	4
	Total	486	63	11

The majority of teacher had diploma / certificate in Primary / Elementary Education. Very few teachers were having M.Ed. degree. Besides, approximately, 1/9th teachers had B.Ed degree.

Availability of Teaching Aids

Data collected indicates that all teaching aids were available to more than 85% teachers in urban schools except others. Similarly, in rural schools most teaching aids were available to more than 94% teachers, except flash cards, science kit, mathematic kit and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
1. School Complex	N	9
	%	0
2. Block Resource Centre	N	348
	%	62.14
3. Teacher Resource Centre	N	0-
	%	0
4. Cluster Resource Centre	N	21
	%	3.75
5. DIET	N	258
	%	46.07
6. SCERT	N	8
	%	1.43
7. Others	N	32
	%	5.71

The in-service training programme were organised the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Maximum teachers were trained by BRC followed by DIET.

Table 12: Theme-wise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	136
Content Enrichment	93
Production of Instructional Material	19
Use of Instructional Material	18
Assessment of Pupil Learning	40
Competency based Teaching Learning	170
Activity based Joyful Learning	179
Others	103

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Activity-based Joyful Learning' followed by 'Competency-based Joyful Learning' but minimum programmes were conducted on 'Use of Instructional Material'.

However, out of total 560 teachers 33(5.89%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 5% and 7%, respectively. The same was also true for teachers in rural areas. However, percentage of female teachers who had not attended any in-service training programme in both rural and urban schools and male teacher in urban schools was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 below:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	191	210	223	202
	%	36.42	39.85	42.31	38.33
Average	N	324	300	297	310
	%	61.48	56.93	56.36	58.82
Low	N	12	17	7	15
	%	2.27	3.23	1.33	2.85

It is evident that approximately 61% training programmes were 'average' effective in terms of utility of knowledge gained during training programmes. Besides 36% programmes were considered as 'highly' useful. The impact of these training programmes was rated as 'average' by 56% to 59% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 38% to 42% teachers.

Academic Assistance received from various Sources

Information gathered shows that teachers both in rural and urban areas were getting maximum assistance from 'Other teachers of the School' and 'Head of the School' most of the items. From other sources they were getting assistance 'sometimes'.

STUDENTS PROFILE

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 99.47% students in the schools was same as the Language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	107	2.10	128	2.51
Illiterate	1306	25.62	3311	64.95
Literate	466	9.14	499	9.79
Primary	924	18.12	589	11.55
Secondary	1517	29.76	411	8.06
Sr. Secondary	458	8.98	55	1.07
Degree and above	223	4.37	18	0.35
Donot Know/Cannot say	97	1.90	87	1.71

Table 14 indicates that approximately 26% fathers and 65% mothers of the students were illiterate. Only 4% fathers and less than 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	157	43	200	106	29	135
Household/ Housewife	17	0	17	3732	784	4516
Farmer	1563	36	1599	103	1	104
Poultry farming	22	1	23	2	0	2
Agricultural labour	533	37	570	111	1	112
Picking forest produce	10	2	12	1	0	1
Domestic Servent	32	7	39	17	9	26
Street Vender	119	65	184	13	1	14
Manual unskilled worker	444	126	570	65	28	93
Skilled worker	646	288	934	14	21	35
Clerical worker	72	22	94	4	1	5
Shopkeeper	233	122	355	9	2	11
Employer	48	14	62	0	0	0
Manager/Senior Officer	89	17	106	8	5	13
Others	223	110	333	23	8	31

In rural areas majority of mothers were housewives and fathers were farmers. In urban areas majority of mothers were housewives and fathers were skilled workers. Number of Manager/Senior Officers father was more than mothers in both rural and urban areas. In decreasing order, fathers were working as farmer, skilled worker, manual unskilled worker agricultural labour, shopkeeper, others, street vendor, manager/senior officer, and clerical worker etc. In decreasing order mothers were working as household/housewives, agricultural labour, farmer, manual skilled worker, skilled worker, others, domestic servant and street vendor etc. However, not a single mother was employer in urban or rural areas.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	739	601	124	127	863	728
	%	32.48	31.09	29.25	27.25	31.97	30.35
Mother	N	195	203	37	39	232	242
	%	8.57	10.5	8.73	8.37	8.6	10.09
Elder Brother/Sister	N	622	559	119	100	741	659
	%	27.34	28.92	28.07	21.46	27.45	27.47
Others	N	228	213	66	110	294	323
	%	10.02	11.02	15.57	23.61	10.89	13.46

Girls and boys both in rural, and urban as well as overall were getting more help from father/guardian than any other. However, boys were getting more academic assistance from father, than girls. The descending order of academic assistance provided by the family members was father, elder brother and sisters and mothers.

Attendance

It is evident that the maximum percentage 37.16% for boys and 35.89% for girls were attending school between 90-100% of working days whereas 32.49% boys and 33.47% girls were attending school between 80-90% of working days. Approximately, 87% students were attending schools for more than 70% of working days. However, only 5% boys and 4% girls were attending school less than 60% of total working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Uttar Pradesh. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

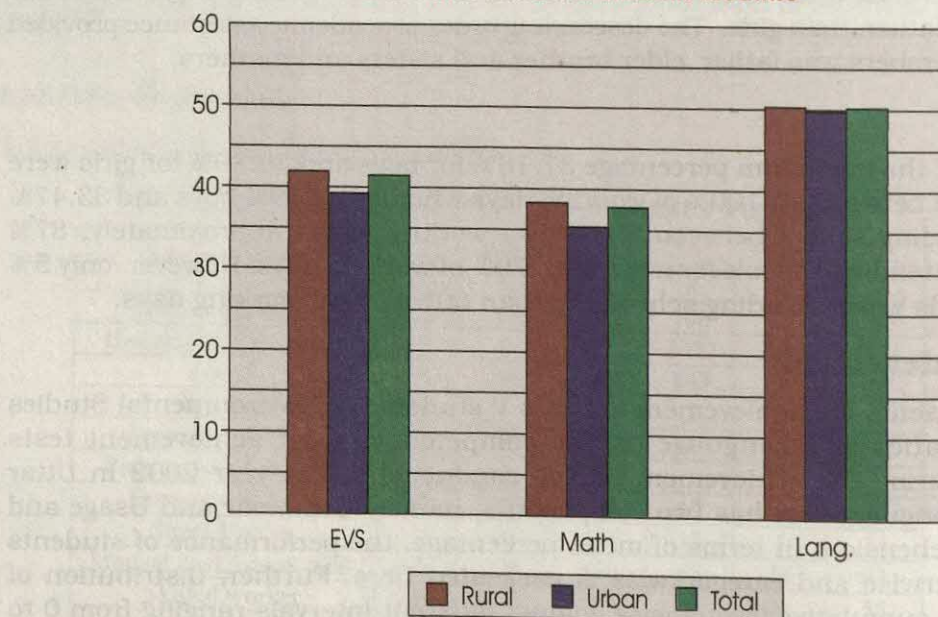
Genderwise and Areawise Achievement

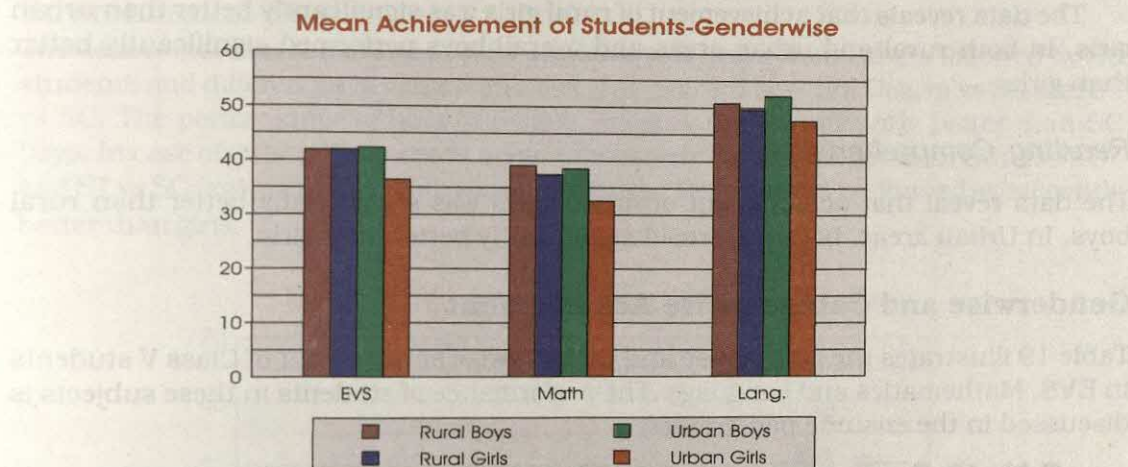
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	2275	41.89	18.8	424	42.29	19.9	0.4	2699	41.95	18.98	0.38
	Girls	1933	41.95	19.84	466	36.44	15.75	-5.51	2399	40.88	19.24	-6.42
	Diff.		-0.06			5.85				1.07		
	Total	4208	41.92	19.28	890	39.23	18.07	-2.69	5098	41.45	19.1	-3.99
	CR Value		-0.1			4.83				1.99		
Mathe- matics	Boys	2275	39.07	20.09	424	38.51	18.72	-0.56	2699	38.99	19.88	-0.56
	Girls	1933	37.43	20.26	466	32.56	15.34	-4.87	2399	36.49	19.5	-5.75
	Diff.		1.64			5.95				2.5		
	Total	4208	38.32	20.18	890	35.39	17.28	-2.93	5098	37.81	19.74	-4.46
	CR Value		2.63			5.16				4.53		
Langu- age	Boys	2275	50.86	18.89	424	52.21	18.95	1.35	2699	51.07	18.9	1.35
	Girls	1933	49.63	19.92	466	47.55	18.01	-2.08	2399	49.23	19.58	-2.19
	Diff.		1.23			4.66				1.84		
	Total	4208	50.3	19.38	890	49.77	18.6	-0.53	5098	50.2	19.24	-0.77
	CR Value		2.04			3.75				3.4		

Mean Achievement of Students-Areawise





Environmental Studies

The data given in Table 17 reveals that performance of boys was significantly better than girls. The achievement of rural students as well as rural girls was significantly better than their urban counterparts. In urban areas, boys performed significantly better than girls.

Mathematics

The data reveals that achievement of rural students as well as rural girls was significantly better than their counterparts in urban areas. In both rural and urban areas and overall boys performed significantly better than girls.

Language

The data reveals that achievement of rural girls was significantly better than urban girls. In both rural and urban areas and overall boys performed significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	2275	55.28	20.85	424	56.1	20.88	0.82	2699	55.41	20.85	0.74
	Girls	1933	53.42	22.07	466	51.28	20.9	-2.14	2399	53	21.86	-1.96
	Diff.		1.86			4.82				2.41		
	Total	4208	54.42	21.44	890	53.58	21.01	-0.84	5098	54.27	21.36	-1.08
	CR Value		2.79			3.44				4.02		
Compre- hension	Boys	2275	43.51	21.7	424	45.71	20.92	2.2	2699	43.86	21.59	1.98
	Girls	1933	43.32	22.17	466	41.34	19.39	-1.98	2399	42.93	21.67	-1.92
	Diff.		0.19			4.37				0.93		
	Total	4208	43.42	21.91	890	43.42	20.24	0	5098	43.42	21.63	0
	CR Value		0.28			3.22				1.53		

The data reveals that achievement of rural girls was significantly better than urban girls. In both rural and urban areas and overall boys performed significantly better than girls.

Reading Comprehension

The data reveal that achievement of urban boys was significantly better than rural boys. In Urban areas, boys performed significantly better than girls.

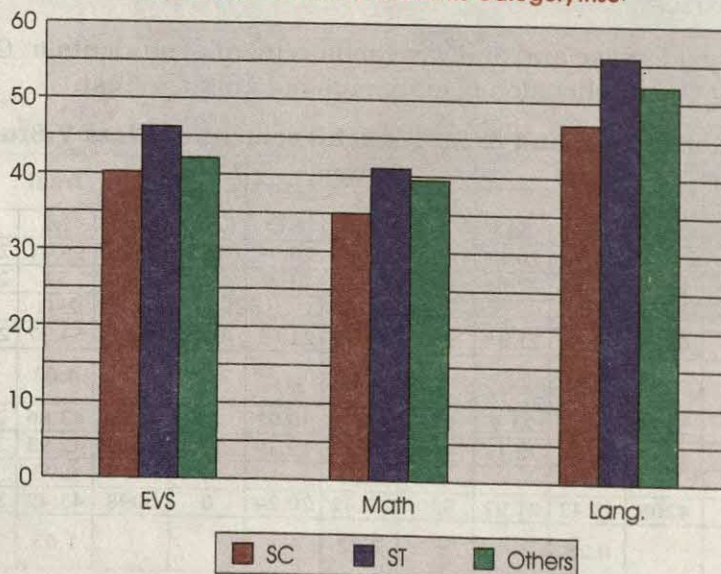
Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	1027	40.57	19.4	41	42.99	21.22	1631	42.79	18.61	2.22	2.92	-0.2	-0.06	2.42	0.72
	Girls	916	39.79	19.32	33	50.23	24.97	1450	41.36	18.97	1.57	1.94	-8.87	-2.03	10.44	2.38
	Diff.		0.78			-7.24			1.43							
	Total	1943	40.2	19.36	74	46.22	23.09	3081	42.12	18.79	1.92	3.46	-4.1	-1.52	6.02	2.21
	CR Value		0.89			-1.33			2.11							
Mathematics	Boys	1027	35.85	19.13	41	40.57	18.86	1631	40.92	20.12	5.07	6.52	0.35	0.12	4.72	1.57
	Girls	916	34.08	18.8	33	41.55	17.65	1450	37.89	19.82	3.81	4.7	-3.66	-1.17	7.47	2.38
	Diff.		1.77			-0.98			3.03							
	Total	1943	35.02	18.99	74	41.00	18.21	3081	39.49	20.03	4.47	7.95	-1.51	-0.7	5.98	2.77
	CR Value		2.06			-0.23			4.21							
Language	Boys	1027	47.82	19.1	41	53.29	19.21	1631	53.07	18.49	5.25	6.99	-0.22	-0.07	5.47	1.79
	Girls	916	46.05	19.67	33	59.09	25.23	1450	51.01	19.08	4.96	6.04	-8.08	-1.83	13.04	2.94
	Diff.		1.77			-5.8			2.06							
	Total	1943	46.99	19.39	74	55.88	22.13	3081	52.1	18.79	5.11	9.21	-3.78	-1.46	8.89	3.41
	CR Value		2.08			-1.09			3.06							

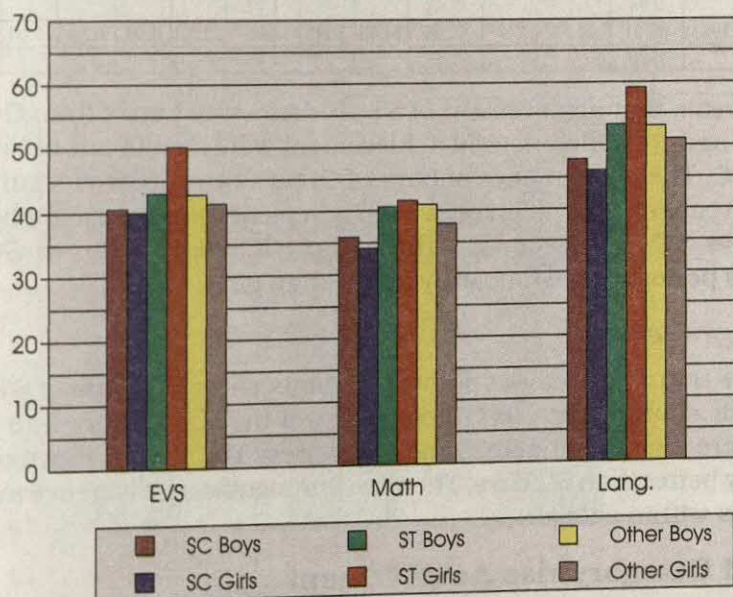
Mean Achievement of Students-Categorywise



Environmental Studies

The data reveal that achievement of ST students was better than Others followed by SC students and differences in achievement were significant between Others vs SC and ST vs SC. The performance of boys of Others category was significantly better than SC boys. In case of girls, differences in achievement were significant between Others vs ST and ST vs SC favouring ST in both cases. In Others category, boys performed significantly better than girls.

Mean Achievement of Students-Genderwise



Mathematics

The data reveals that achievement of ST students was better than Others followed by SC students and differences in achievement were significant between Others vs SC and ST vs SC. In case of boys, the differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST, respectively. Same was the case with achievement of girls. In SC and Others categories, boys performed significantly better than girls.

Language

The data reveals that achievement of ST students was better than Others followed by SC students and differences in achievement were significant between Others vs SC and ST vs SC. In case of boys, the differences in achievement were significant between Others vs SC favouring Others. In case of girls, differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST, respectively. In SC and Others categories boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	1027	51.76	21.06	41	57.27	21.1	1631	57.65	20.39	5.89	7.11	0.38	0.11	5.51	1.64
	Girls	916	49.5	22	33	61.33	26.11	1450	55.02	21.37	5.52	6.01	-6.31	-1.38	11.83	2.57
	Diff.		2.26			-4.06			2.63							
	Total	1943	50.69	21.54	74	59.08	23.39	3081	56.42	20.9	5.73	9.29	-2.66	-0.97	8.39	3.04
	CR Value		2.31			-0.72			3.48							
Reading Comprehension	Boys	1027	41.25	21.58	41	46.67	22.16	1631	45.43	21.43	4.18	4.88	-1.24	-0.35	5.42	1.54
	Girls	916	40.31	21.55	33	55.35	26.64	1450	44.31	21.41	4	4.41	-11.04	-2.36	15.04	3.21
	Diff.		0.94			-8.68			1.12							
	Total	1943	40.81	21.56	74	50.54	24.48	3081	44.9	21.43	4.09	6.56	-5.64	-1.96	9.73	3.37
	CR Value		0.96			-1.33			1.45							

The data reveals that achievement of ST students was better than Others followed by SC students and the differences in achievement were significant between Others vs SC and ST vs SC. The performance of boys of Others category was significantly better than SC boys. In case of girls, differences in achievement were significant between Others vs SC and ST vs SC and favoured Others and ST, respectively. In SC and Others categories, boys performed significantly better than girls.

Reading Comprehension

The data reveals that achievement of total students as well as girls of ST category was better than their counterparts in Others followed by SC category and differences in achievement were significant across the categories. The performance of Others boys was significantly better than SC boys. There was no significant difference in achievements of boys and girls within categories.

Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

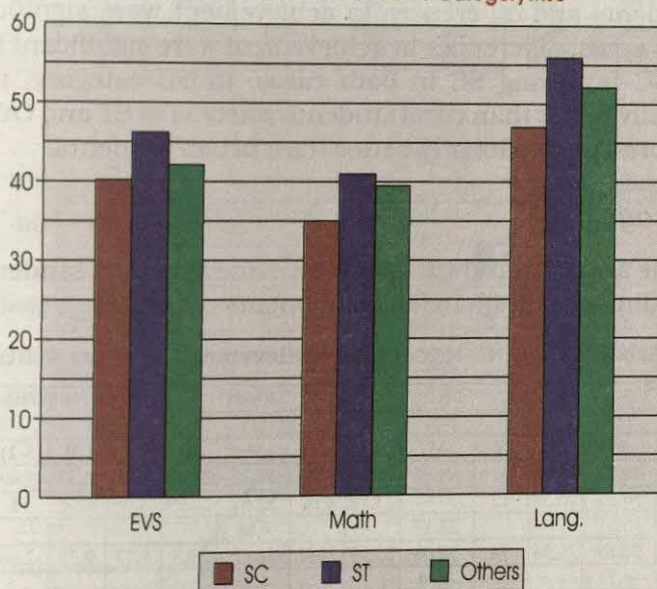
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	1679	39.34	19.08	62	49.72	22.53	2467	43.47	19.13	4.13	6.83	-6.25	-2.16	10.38	3.58
	Urban	264	45.7	20.28	12	28.12	17.26	614	36.67	16.28	-9.03	-6.4	8.55	1.7	-17.58	-3.42
	Diff.		-6.36			21.6			6.8							
	Total	1943	40.2	19.36	74	46.22	23.09	3081	42.12	18.79	1.92	3.46	-4.1	-1.52	6.02	2.21
	CR Value		-4.77			3.76			8.93							
Mathematics	Rural	1679	34.45	18.96	62	42.78	18.34	2467	40.84	20.62	6.39	10.28	-1.94	-0.82	8.33	3.51
	Urban	264	38.63	18.85	12	31.8	14.99	614	34.07	16.44	-4.56	-3.41	2.27	0.52	-6.83	-1.52
	Diff.		-4.18			10.98			6.77							
	Total	1943	35.02	18.99	74	41	18.21	3081	39.49	20.03	4.47	7.95	-1.51	-0.7	5.98	2.77
	CR Value		-3.35			2.23			8.65							
Language	Rural	1679	46	19.41	62	59.48	20.45	2467	52.99	18.76	6.99	11.54	-6.49	-2.47	13.48	5.11
	Urban	264	53.24	18.05	12	37.29	21.91	614	48.52	18.53	-4.72	-3.52	11.23	1.76	-15.95	-2.48
	Diff.		-7.24			22.19			4.47							
	Total	1943	46.99	19.39	74	55.88	22.13	3081	52.1	18.79	5.11	9.21	-3.78	-1.46	8.89	3.41
	CR Value		-6.00			3.25			5.37							

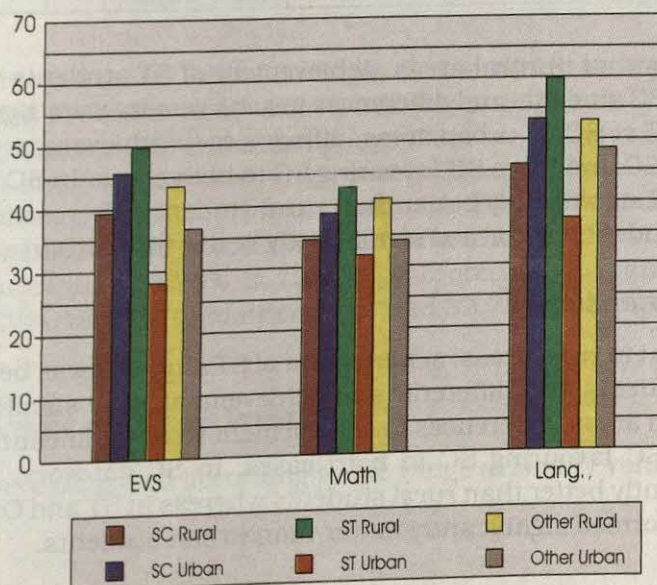
Environmental Studies

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In SC category, urban students performed significantly better than rural students whereas in ST and Others categories, rural students performed significantly better than urban students.

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Mathematics

The data reveals that in rural areas, differences in achievement were significant between Others vs SC and ST vs SC favouring Others and ST, respectively. In urban areas, SC students performed significantly better than Others. In SC category, urban students performed significantly better than rural students whereas in ST and Others categories, rural students performed significantly better than urban students.

Language

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In SC category, urban students performed significantly better than rural students whereas in ST and Others categories, rural students performed significantly better than urban students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	1679	49.81	21.56	62	62.84	21.54	2467	57.35	20.77	7.54	11.22	-5.49	-1.98	13.03	4.68
	Urban	264	56.32	20.58	12	39.67	23.78	614	52.67	20.99	-3.65	-2.4	13	1.88	-16.65	-2.39
	Diff.		-6.51			23.17			4.68							
	Total	1943	50.69	21.54	74	59.08	23.39	3081	56.42	20.9	5.73	9.29	-2.66	-0.97	8.39	3.04
	CR Value		-4.75			3.14			4.95							
Reading Comprehension	Rural	1679	39.66	21.62	62	53.87	23.48	2467	45.72	21.68	6.06	8.85	-8.15	-2.7	14.21	4.69
	Urban	264	48.11	19.77	12	33.33	23.09	614	41.61	20.05	-6.5	-4.45	8.28	1.23	-14.78	-2.18
	Diff.		-8.45			20.54			4.11							
	Total	1943	40.81	21.56	74	50.54	24.48	3081	44.9	21.43	4.09	6.56	-5.64	-1.96	9.73	3.37
	CR Value		-6.37			2.81			4.47							

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and differences in achievement were significant between Others vs SC and ST vs SC. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In SC category, urban students performed significantly better than rural students whereas in ST and Others categories, rural students performed significantly better than urban students.

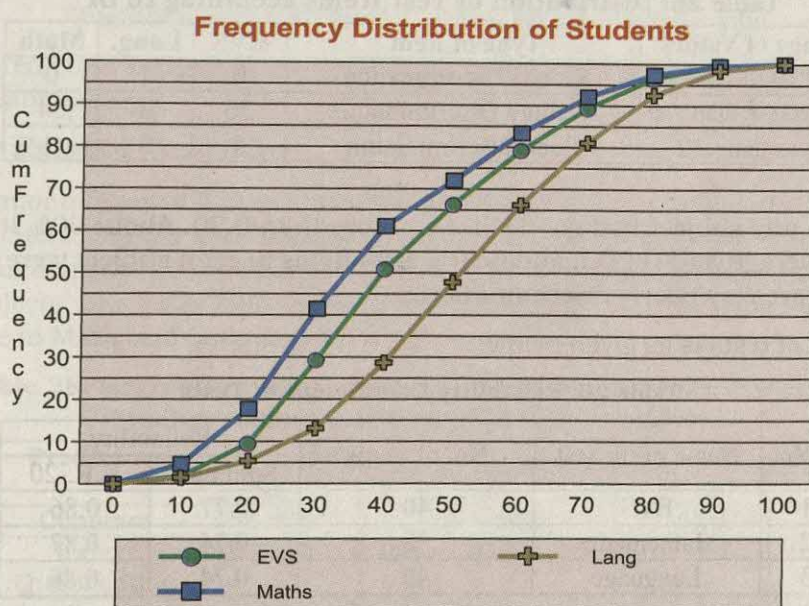
Reading Comprehension

The data reveals that in rural areas, achievement of ST students was better than Others followed by SC students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In SC category, urban students performed significantly better than rural students whereas in ST and Others categories, rural students performed significantly better than urban students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	94	392	1009	1102	782	661	514	365	158	21
	cf	94	486	1495	2597	3379	4040	4554	4919	5077	5098
	cf(%)	1.81	9.53	29.33	50.94	66.28	79.25	89.33	96.49	99.59	100
Math	f	238	666	1208	1003	556	580	441	274	107	25
	cf	238	904	2112	3115	3671	4251	4692	4966	5073	5098
	cf(%)	4.67	17.73	41.43	61.10	72.01	83.39	92.04	97.41	99.51	100
Language	f	73	203	392	795	974	939	757	586	298	81
	cf	73	276	668	1463	2437	3376	4133	4719	5017	5098
	cf(%)	1.43	5.41	13.10	28.70	47.80	66.22	81.07	92.57	98.41	100



The figures posted in Table 23 reveals that in all three subjects the distribution of scores covered the entire range from 0-100 per cent. The last number of cases in EVS (21), in Mathematics (25) and in Language (73) were in the range 90-100 per cent, 90-100 per cent and 0-10 per cent, respectively. The maximum number of cases in EVS (1102), in Mathematics (1208) and in Language (974) were in the range 30-40 percent, 20-30 percent and 40-50 percent, respectively. The 33.72% students in EVS, 27.99% in Mathematics and 52.20% in Language scored more than 50% marks where as 20.75% in EVS, 16.61% in Mathematics and 33.78% in Language scored more than 60% marks.

CLASSIFICATION OF TEST ITEMS

Test items were classified according to the range of facility values in Table 24 :

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	2	2	3
25 to less than 50	Difficult	30	21	29
50 to less than 75	Average	8	17	06
75 to 100	Very Easy	0	0	0

Very few items in all subjects were very difficult. About 75% items in EVS, 52% items in Language and 72% items in Mathematics were difficult. Nearly 20% items in EVS, 42% items in Language and 15% items were average difficult. And no items in any subject were very easy.

Table 25: Distribution of Test Items according to DI

Range of Values	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	1	0
.30 to less than .70	Average Discrimination	36	36	34
Less than .30	Poor Discrimination	4	3	4

No item in any subject had good D.I. i.e., more than 0.70. About 90% items in all subject had average value of D.I. and nearly 10% items in each subject were very easy, hence these were very poorly discrimination.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.77	0.86
2	Mathematics	38	0.74	0.87
3	Language	40	0.74	0.86

The reliability of tests is good.

IMPACT OF INTERVENING VARIABLES

School Related Variables

The average pupil-teacher ratio in the schools is 60, which is very high. It suggests that only increase in the number of teachers in the school i.e. by reducing the pupil-teacher ratio will increase the learning achievement of children in all the three subjects. Ancillary facilities, like safe drinking water, toilet facilities, annual medical check up and immunisation programme have helped the children in improving their learning skills in EVS and Language. However, negative association of competency based teaching learning material with language indicated that teachers could not understand how to use this material. Contribution of other valuables is not significant.

Table 27: Regression and Correlation Co-efficient of the Predictors of School-related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	35.617	--	29.236	--	23.512	--
PTR	-0.037	-0.010	-0.067	-0.005	-0.017	-0.049
Com_Participation	0.439	0.047	1.008	0.067	1.483*	0.106*
Teach-aid	0.569	0.119*	.0490	0.092	0.172	0.084
Physical facility	0.126	0.088	0.227	0.072	0.572*	0.113*
Ancillary facility	1.246	0.125*	0.854	0.089	0.786	0.121*
Instructional time	0.030	0.070	0.012	0.007	0.013	0.004
Working day	0.016	0.007	0.079	0.028	0.055	0.030
Index-Comp. TLM	0.029	0.056	0.036	0.071	-0.827	-0.010
R²	0.035		0.028		0.031	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 3.5% of total variance in EVS, 2.8% in Mathematics and 3.1% in Language.

Teacher Related Variables

Help of senior officers of school organisation to teachers i.e., by the head of institution, senior teachers, Cluster and Block Resource Coordinators, BEO/DEO/AIOS; and DIET faculty has helped the teachers in improving the learning achievement of children in three subjects i.e., EVS, Mathematics and Language. The teaching experience also contribute in Math and Language achievement.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	36.450	--	31.532	--	44.976	--
Index-Qualification	2.521*	0.099*	1.139	0.048	1.373	0.064
Index-Experience	2.190	0.067	5.191*	0.142**	4.114**	0.130**
Index-Teaching Aid	2.022*	0.107*	1.389*	0.081**	1.799*	0.104*
Index-School Org.	0.637**	0.150**	0.420*	0.094*	0.461*	0.120**
R²	0.040		0.033		0.038	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 4.0% of total variance in EVS, 3.3% in Mathematics and 3.8% in Language.

Pupil Related Variables

Teaching-learning processes adopted by teachers in school, percentage attendance of students in the school school practices and academic assistance provided by the family members to the children influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these variables with the three criterions indicates that active involvement of teachers and family members of the children enhance the level of achievement of children in the three subjects. Further the negative association of age indicates that younger ones perform better than older ones. Similarly students who were detained in any class performed poor than those not detained.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	42.419	--	32.405	--	44.102	--
Index-Ed & Occu	2.154**	0.056**	2.772**	0.104**	4.419**	0.137**
Index-Schooling	0.667	0.040**	1.527**	0.066**	0.070	0.014
Index-TLP	3.478**	0.131**	3.217**	0.119**	3.159**	0.119**
Age	-0.0886**	-0.066**	-0.238	-0.028*	-0.038	-0.016
Detention	-1.316**	-0.082**	-0.133**	-0.080**	-0.092**	-0.068**
Attendance	0.142	0.119**	0.139**	0.111	0.112**	0.097**
R²	0.045		0.042		0.043	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 4.5% of total variance in EVS, 4.2% in Mathematics and 4.3% in Language.

One can infer from the above analysis that more teachers in school (lower pupil-teacher ratio), active involvement of senior officers in teaching-learning processes and active involvement of teachers in class and better education and occupation status of parents enhance their learning achievement in the subjects.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In Uttar Pradesh out of 7 districts, Bijnor, Agra, Lakhimpur and Pratapgarh are the DPEP district. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP Wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	1621	43.04	20.24	1078	40.31	16.77	-3.81
	Girls	1440	42.5	20.02	959	38.44	17.73	-5.21
	Diff.		0.54			1.87		
	Total	3061	42.79	20.14	2037	39.43	17.25	-6.37
	CR Value		0.74			2.44		
Mathe- matics	Boys	1621	40.3	20.42	1078	37.01	18.87	-4.29
	Girls	1440	38.62	20.12	959	33.29	18.06	-6.76
	Diff.		1.68			3.72		
	Total	3061	39.51	20.29	2037	35.25	18.58	-7.73
	CR Value		2.29			4.54		
Language	Boys	1621	52.24	20.06	1078	49.32	16.87	-4.08
	Girls	1440	50.87	19.98	959	46.75	18.69	-5.14
	Diff.		1.37			2.57		
	Total	3061	51.6	20.03	2037	48.11	17.79	-6.52
	CR Value		1.89			3.24		

The data reveals that in all the three subjects, the achievement of students of DPEP districts was significantly better than students of non-DPEP districts.

HARD SPOT OF LEARNING

In EVS, question number 21 and 22 were found very difficult and 30(75%) items were found difficult. The hard spots were found in almost all units.

In Language, question number 38 and 39 were found very difficult and 21(52%) items were found difficult. The hard spots were: structure, vocabulary, comprehension of instructions, time table, informatical passage and story.

In Mathematics, question number 29, 34 and 37 were found very difficult and 29 (75%) items were found difficult. The hard spots were: number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

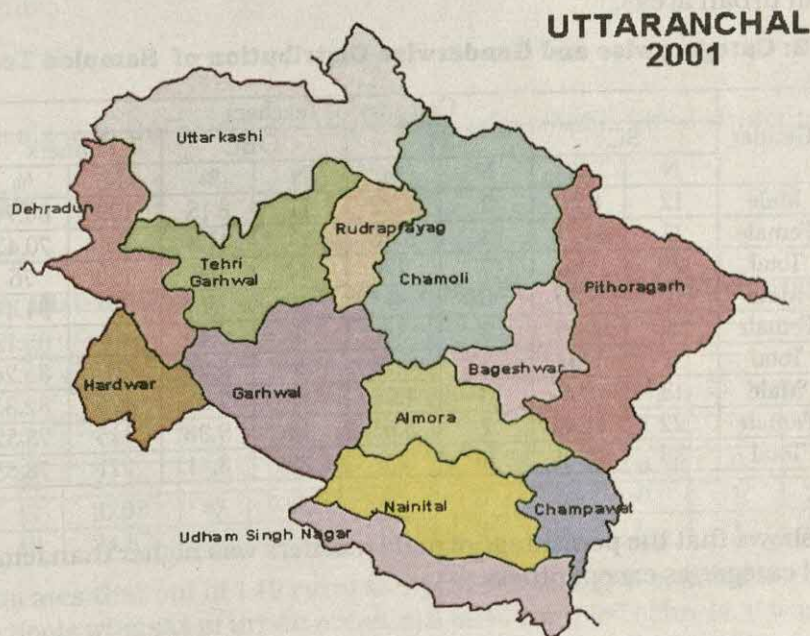
Analysis of the results signified that:

- Musical instruments were available in approximately 23% schools. TV and Electric connections were available in very few schools. Computers were available in only 1% schools.
- Competency-based textbooks, workbooks and teachers' handbooks were available in school in 2001 as compared to year 1998.
- More students were getting more benefit under free text books scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 216.
- Almost all schools in rural areas were having Village Education Committees.
- AEC, SMC and PTA were more percentage in schools located in urban areas than schools in rural areas.
- Percentage of female teachers was higher than male teachers in urban schools. Average number of teachers per school in urban schools was higher than in rural schools.
- Majority of teachers had diploma/certificate in primary/elementary education. In general, teaching aids were more available to female teachers than male teachers.
- Percentage of PG degree holder female teachers was more than male teachers. Very few teachers were having educational qualification below Class X level
- More degree holder female teachers studied Mathematics, Science, Language and Social Science than male teachers.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted by Block Resource Centre and minimum by SCERT.
- Maximum in-service training programmes were conducted on 'Activity-based Joyful Learning' and minimum on 'Use of Instructional Material', during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 6% teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas whereas majority of fathers were skilled worker and mothers were housewives in urban areas.
- No mother was employer in urban or rural areas.
- In most of cases teachers were getting assistance always from other teacher of school.
- For approximately almost students medium of instructions in the school was same as the Language spoken at home.
- Students were getting more academic assistance from fathers than other family members. Boys were getting more academic assistance from father than girls.
- In general educational qualification of mothers was poorer than fathers. Approximately, 2/3rd mothers were illiterate.
- Approximately, 87% students were attending schools above 70% working days. Approximately, less than 4% students were attending schools below 60% of the total working days.

- It is evident from the results that mean achievement for EVS, Mathematics and Language is estimated as 41.45%, 37.81% and 50.2%, respectively.
- The achievement of boys was significantly better than girls in Mathematics and Language.
- The performance of rural students was significantly more than their counterpart urban area in EVS and Mathematics.
- The mean achievement of ST students was better than SC and Others category student. However, the number of ST students was few in comparison to SC and Others category.
- Achievement of students of DPEP districts was significantly better than students non-DPEP districts in all three subjects.
- More teachers in school (lower pupil-teacher ratio) active involvement of senior officers of school organisation in teaching-learning processes, active involvement of teachers in the class and help the children in improving their learning achievement in the three subjects.

INTRODUCTION

The state of Uttaranchal came into existence in the year 2000. Uttaranchal is one of the states having literacy rates above national levels. Total literacy rate as per 2001 Census is 72.28% while that of males and females is 84.01% and 60.26%, respectively. As per the selected Educational Statistics, 2001, the number of primary schools is 13,789 and approximately 10,72,000 students are enrolled in these schools. There are 13 districts in the state.



All primary schools in the state have Classes I to V. Most of the primary schools are within a distance of 1 km. From the habitation. The state is doing all its best to achieving quality in education. The gross enrolment ratio is very encouraging.

SAMPLE

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 197 schools were sampled from Almora, Chamoli, Dehradun and Udham Singh Nagar districts of Uttaranchal. Out of total sampled schools, 50 schools were from Almora, 50 from Chamoli, 49 from Dehradun and remaining 48 from Udham Singh Nagar.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	149	149	100	0	0	0	0
Urban	48	48	100	0	0	0	0
Total	197	197	100	0	0	0	0

Teachers

A total of 345 teachers were sampled from 197 sampled schools. Out of 345 teachers, 153 were male and 192 were female. Areawise, 250 teachers were from rural areas and 95 were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	12	8.89	3	2.22	11	8.15	109	80.74	135
	Female	17	14.78	4	3.48	13	11.3	81	70.43	115
	Total	29	11.6	7	2.8	24	9.6	190	76	250
Urban	Male	1	5.56	0	0	0	0	17	94.44	18
	Female	5	6.49	3	3.9	5	6.49	64	83.12	77
	Total	6	6.32	3	3.16	5	5.26	81	85.26	95
Total	Male	13	8.5	3	1.96	11	7.19	126	82.35	153
	Female	22	11.46	7	3.65	18	9.38	145	75.52	192
	Total	35	10.14	10	2.9	29	8.41	271	78.55	345

Table 2 shows that the percentage of male teachers was higher than female teachers in case of all categories except others.

Students

A total number of 2,741 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students, genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Almora	Rural	277	250	527
	Urban	114	132	246
	Total	391	382	773
Chamoli	Rural	185	201	386
	Urban	36	71	107
	Total	221	272	493
Dehradun	Rural	206	215	421
	Urban	114	112	226
	Total	320	327	647
Udhamsingh Nagar	Rural	284	310	594
	Urban	132	102	234
	Total	416	412	828
Total	Rural	952	976	1928
	Urban	396	417	813
	Total	1348	1393	2741

Out of 2,741 students, 1,928 students were from rural areas and remaining 813 students were from urban areas. Out of the total sample, 1,348 were boys and 1,393 were girl students.

PROFILES

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	36	24.16	149	100	0	0	0	0	0	0
Urban	13	27.08	47	97.92	0	0	0	0	1	2.08
Total	49	24.87	196	99.49	0	0	0	0	1	0.51

Table 4 indicates that out of 149 rural sampled schools, pre-schools were attached with only 36 schools whereas in urban areas, out of 48 sampled schools, it was attached with 13 schools. Further, 100% schools in rural areas and 97.92% schools in urban areas were only primary schools. No school having secondary classes was figured in the sample. However, only one sr. secondary school was in the sample.

Facilities related to teaching-learning process

It was observed that maps, globes, charts, reference books, dictionaries and encyclopedia were available in 71% to 76% schools. Magazines, journals and newspapers were available only in 26% schools. Primary Science kits and maths kits

were available in 62% to 63% schools. Besides, game equipment and mini tool kit were available in 45% to 47% schools. Play material and toys were available in 59% schools. However, children's books were available in 84% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chalk and duster, chairs and tables for teachers and water pitcher, ladel and glasses were available in 91% and more schools. Besides, play ground, dustbins were available in 56% and 60% schools, respectively. Pin-up board/notice board were available in 41% schools. However, musical instruments were available in only 29% schools.

Ancillary Facilities

TV and Computer were available only 4% to 9% schools. Electric connection was available in 16% schools. Separate toilet for girls and first aid kit were available in 25% to 27% schools. Annual medical check-up for children, and immunization facility was available in 45% schools. Besides, toilet facilities and annual medical check-up for children were available in 53% to 54% schools. However, safe drinking water facility was available in 66% schools.

Competency Based Teaching Materials

Information gathered shows that out of 197 schools, competency-based textbooks were available in 116 to 118 schools for Classes I to V in the year 2001, against in any none for Classes I to V in the year 1998.

Workbooks were available in 10 schools in the year 2001 as compared to non availability school in the year 1998 for Classes I to V. The teachers' Handbooks were available in 104 to 108 schools in the year 2001 and in 0 to 4 schools in the year 1998 for primary classes. Besides, teaching aids were available in 29 to 34 schools in 2001, but 2 to 5 schools in 1998 for Classes I to V.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	4866	4882	1972	1435	1017	1025	2503	2949	10358	10291
	%	46.98	47.44	19.04	13.94	9.82	9.96	24.16	28.66	100	100
Free uniform	N	940	943	603	602	16	16	76	77	1635	1638
	%	57.49	57.57	36.88	36.75	0.98	0.98	4.65	4.70	100	100
Free textbooks	N	4689	4664	1137	1170	1068	1120	2733	3248	9627	10202
	%	48.71	45.72	11.81	11.47	11.09	10.98	28.39	31.83	100	100
Scholarship for regular attendance	N	2229	2305	1219	1215	364	396	691	729	4503	4645
	%	49.50	49.62	27.07	26.16	8.08	8.53	15.35	15.69	100	100
Other Schemes	N	2657	2426	435	486	98	147	407	505	3597	3564
	%	73.87	68.07	12.08	13.64	2.73	4.12	11.32	14.17	100	100

Above table value indicates both boys and girls from SC category getting maximum benefit from all the schemes like mid-day meal, free uniform, free textbook, scholarship

for regular attendance and other schemes.

Instructional Time

Average number of working days in schools was approximately 224 days on an average, schools were having 7 periods in a day of approximately 36 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 149 rural schools, 135(90.6%) schools were having Village Education Committees (VEC). Except SMC, Parent-Teacher Association and Area Education Committees were found more in rural schools than urban schools in terms of percentage.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	135	22	157
	%	90.6	45.83	79.7
AEC	N	41	11	52
	%	27.52	22.92	26.4
SMC	N	45	21	66
	%	30.2	43.75	33.5
PTA	N	107	27	134
	%	71.81	56.25	68.02

TEACHERS PROFILE

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	149	169	40.92	244	59.08	413	3	38
Urban	48	38	15.97	200	84.03	238	5	39
Total	197	207	31.8	444	68.2	651	3	39

Table 7 shows that overall number of male teachers was less than female teachers. The average number of teachers per school in rural and urban areas was 3 and 5 respectively. Further, average pupil-teacher ratio was 39:1, however, this ratio was 38:1 approximately in rural schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. The trend was same for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary, sr. secondary level was lower than their counterparts. Besides, only 1% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	2	1.31	40	26.14	30	19.61	40	26.14	41	26.8	153
Female	2	1.04	27	14.06	30	15.63	68	35.42	65	33.85	192
Total	4	1.16	67	19.42	60	17.39	108	31.3	106	30.72	345

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	8	5.23	119	77.78	16	10.46	10	6.54	153
	Female	127	66.15	52	27.08	12	6.25	1	0.52	192
	Total	135	39.13	171	49.57	28	8.12	11	3.19	345
Science	Male	57	37.25	60	39.22	18	11.76	18	11.76	153
	Female	109	56.77	51	26.56	19	9.9	13	6.77	192
	Total	166	48.12	111	32.17	37	10.72	31	8.99	345
Language (Medium)	Male	2	1.31	53	34.64	66	43.14	32	20.92	153
	Female	5	2.6	36	18.75	65	33.85	86	44.79	192
	Total	7	2.03	89	25.8	131	37.97	118	34.2	345
Social Science	Male	33	21.57	74	48.37	22	14.38	24	15.69	153
	Female	44	22.92	74	38.54	32	16.67	42	21.88	192
	Total	77	22.32	148	42.9	54	15.65	66	19.13	345

The data reveals that in Mathematics, Language and Science the percentage of male teachers who studied these subjects upto degree level was more than female teachers. The trend was reverse in case of Social Science. Similar trend was observed for sr. secondary and secondary level however. It was also true for Social Science at secondary level. Besides, the percentage of male teachers who studied Mathematics, Science and Language below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
197	Male	102	33	0
	Female	154	25	0
	Total	256	58	0

The majority of teacher had diploma/certificate in Primary/Elementary Education. However, not a single teacher was M.Ed degree holder. Besides, approximately, 1/5th teachers had B.Ed degree.

Availability of Teaching Aids

Data collected indicates that all teaching aids were available to more than 85% teachers in urban schools except others. Similarly, most of the teaching aids were available to more than 88% teachers in rural schools except mathematics kit. Genderwise, all teaching aids such as teachers' guide, dictionary, globe, charts, science kit, mathematics kit were more available to female teachers teaching in urban schools than male teachers. The trend was almost similar in rural areas, except for maps, charts and flash cards.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teacher Trained
1. School Complex	N	0
	%	0
2. Block Resource Centre	N	73
	%	34.11
3. Teacher Resource Centre	N	0
	%	0
4. Cluster Resource Centre	N	3
	%	1.4
5. DIET	N	134
	%	62.62
6. SCERT	N	2
	%	0.93
7. Others	N	2
	%	0.93

Data portrays that 214 teachers were trained in the districts during last three years. Out of which 62.62% were by DIET, 34.11% teachers were trained by Block Resource Centre, However, less than 1% teachers were trained by both SCERT and Other Sources.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
1. General Training Programme	22
2. Content Enrichment	14
3. Production of Instructional Material	1
4. Use of Instructional Material	4
5. Assessment of Pupil Learning	12
6. Competency based Teaching Learning	45
7. Activity based Joyful Learning	104
8. Others	73

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Activity-based Joyful-Learning' followed by others and 'Competency-based Teaching-Learning'. Minimum programmes were conducted on 'Production of Instructional Material' i.e., only one programme.

Out of total 345 teachers, 141(40.87%) were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was approximately 37% and 44%. The same was also true for both urban and rural areas teachers. The percentage of female teachers who had not attended any in-service programme was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 :

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	59	61	58	61
	%	28.92	29.90	28.43	29.90
Average	N	144	140	143	140
	%	70.59	68.63	70.10	68.63
Low	N	1	3	3	3
	%	0.54	1.47	1.47	1.47

It is evident that approximately 71% training programmes were average effective in terms of utility of knowledge gained during training programmes. Only 29% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as Average by 69% to 70% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 28% to 30% teachers.

Academic Assistance received from various Sources

Data collected indicates that teachers both in rural and urban areas were getting maximum academic assistance always from 'Head of the School' and it was followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 90% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	89	3.25	65	02.37
Illiterate	451	16.45	1282	46.77
Literate	213	7.77	280	10.22
Primary	486	17.73	521	19.00
Secondary	961	35.06	394	14.37
Sr. Secondary	293	10.69	93	03.39
Degree and above	178	6.49	55	02.01
Donot Know/Cannot say	70	2.55	51	01.60

Table 14 indicates that approximately 16% father and 47% mother of the students were illiterate. Only 6% father and 2% mother were having degree or higher educational qualifications. Further, majority of the remaining fathers were educated either upto primary level or secondary level but mothers were literate or primary or secondary level educated. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	101	38	139	32	11	43
Household/ Housewife	1	0	1	1614	664	2278
Farmer	483	39	522	93	4	97
Poultry farming	8	2	10	1	0	1
Agricultural labour	294	40	334	122	28	150
Picking forest produce	3	4	7	2	0	2
Domestic Servent	9	6	15	17	15	32
Street Vender	23	22	45	0	0	0
Manual unskilled worker	182	83	265	22	32	54
Skilled worker	286	232	518	6	22	28
Clerical worker	64	54	118	1	5	6
Shopkeeper	119	78	197	2	4	6
Employer	24	26	50	0	0	0
Manager/Senior Officer	38	73	111	2	18	20
Others	293	116	409	14	10	24

In rural areas majority of mothers were housewives and fathers were farmers. The trend was similar in urban areas. Only few mothers and fathers were Manager/Senior Officers. In decreasing order, fathers were working as farmer, skilled worker, others, agricultural labour, manual unskilled worker, shopkeeper, clerical worker and manager/senior officer, etc. In decreasing order, mothers were working as household/housewives,

agricultural labour, farmer, manual unskilled worker, domestic servant, skilled worker, Others and manager and senior officer, etc. However, not a single mother was employer.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	264	279	133	157	397	436
	%	27.73	28.59	33.59	37.65	29.45	31.3
Mother	N	66	58	58	73	124	131
	%	6.93	5.94	14.65	17.51	9.2	9.4
Elder Brother/Sister	N	267	270	116	100	383	370
	%	28.05	27.66	29.29	23.98	28.41	26.56
Others	N	139	214	92	129	231	343
	%	14.6	21.93	23.23	30.94	17.14	24.62

Girls and boys both in rural and in urban as well as overall were getting more help from father/guardian than any other. In both rural and urban areas boys were getting more academic assistance from elder brothers/sisters than girls. Girls were getting more assistance from elder brother/sister. The descending order of academic assistance provided by the family members was father, elder brother and sisters, others and mothers in over all.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% and 70-80% of working days was less than boys. It was also true for both rural and urban areas. However, the percentage of girls attending school between 80-90% of working days was more than boys. Only 4% percent boys and girls were attending schools less than 60% of total working days. Approximately, 93% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Uttaranchal. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further, distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

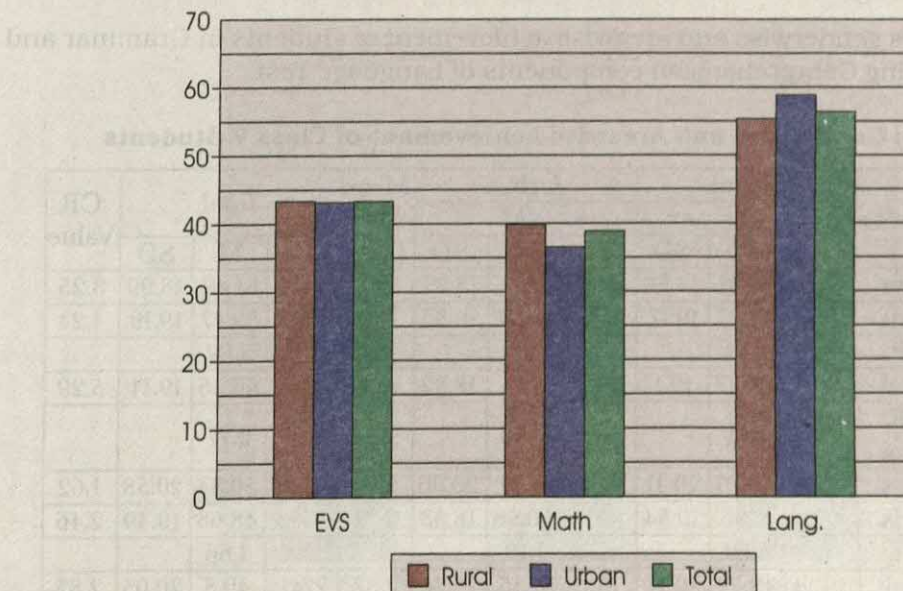
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

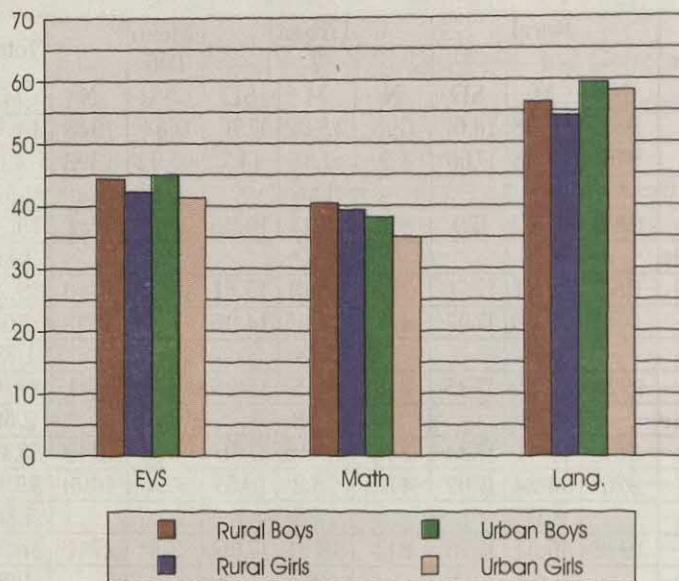
Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	952	44.38	18.07	396	45.02	17.76	0.64	1348	44.57	17.98	0.6
	Girls	976	42.28	17.69	417	41.36	14.7	-0.92	1393	42	16.85	-1
	Diff.		2.1			3.66				2.57		
	Total	1928	43.32	17.9	813	43.14	16.36	-0.18	2741	43.27	17.46	-0.26
	CR Value		2.58			3.19				3.86		
Mathe- matics	Boys	952	40.37	17.61	396	38.13	15.41	-2.24	1348	39.71	17.02	-2.33
	Girls	976	39.28	17.07	417	34.95	14.95	-4.33	1393	37.98	16.58	-4.74
	Diff.		1.09			3.18				1.73		
	Total	1928	39.82	17.35	813	36.5	15.25	-3.32	2741	38.83	16.82	-4.99
	CR Value		1.38			2.98				2.69		
Langu- age	Boys	952	56.41	17.84	396	59.46	17.56	3.05	1348	57.31	17.8	2.89
	Girls	976	54.24	17.62	417	58.2	16.57	3.96	1393	55.43	17.4	4.01
	Diff.		2.17			1.26				1.88		
	Total	1928	55.31	17.76	813	58.81	17.06	3.5	2741	56.35	17.62	4.85
	CR Value		2.69			1.05				2.8		

Environmental Studies

The data given in Table 17 reveals that the performance of boys was significantly better than girls. The achievement of rural students as well as rural girls was significantly better than their urban counterparts. In urban areas, boys performed significantly better than girls.

Mean Achievement of Students-Areawise

Mean Achievement of Students-Genderwise



Mathematics

The data reveals that achievement of rural students as well as rural girls was significantly better than their counterparts in urban areas. In both rural and urban areas, boys performed significantly better than girls.

Language

The data reveals that achievement of rural girls was significantly better than urban girls. In both rural and urban areas, boys performed significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	952	60.41	18.98	396	64.07	18.79	3.66	1348	61.49	18.99	3.25
	Girls	976	58.07	19.17	417	62.77	18.85	4.7	1393	59.47	19.19	4.24
	Diff.		2.34			1.3				2.02		
	Total	1928	59.22	19.1	813	63.4	18.82	4.18	2741	60.46	19.11	5.29
	CR Value		2.69			0.98				2.77		
Compre- hension	Boys	952	49.75	20.41	396	51.77	20.96	2.02	1348	50.34	20.58	1.62
	Girls	976	47.86	19.84	417	50.58	18.53	2.72	1393	48.68	19.49	2.46
	Diff.		1.89			1.19				1.66		
	Total	1928	48.79	20.14	813	51.16	19.74	2.37	2741	49.5	20.05	2.85
	CR Value		2.06			0.86				2.17		

The data reveals that achievement of rural girls was significantly better than urban girls. In both rural and urban areas, boys performed significantly better than girls.

Reading Comprehension

The data reveal that achievement of urban boys was significantly better than rural boys. In Urban areas, boys performed significantly better than girls.

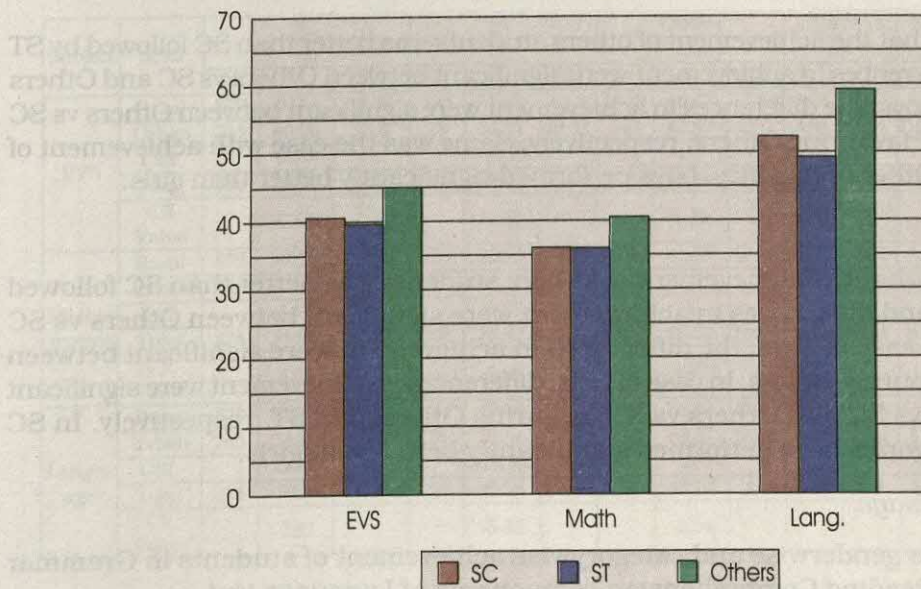
Genderwise and Categorywise Achievement

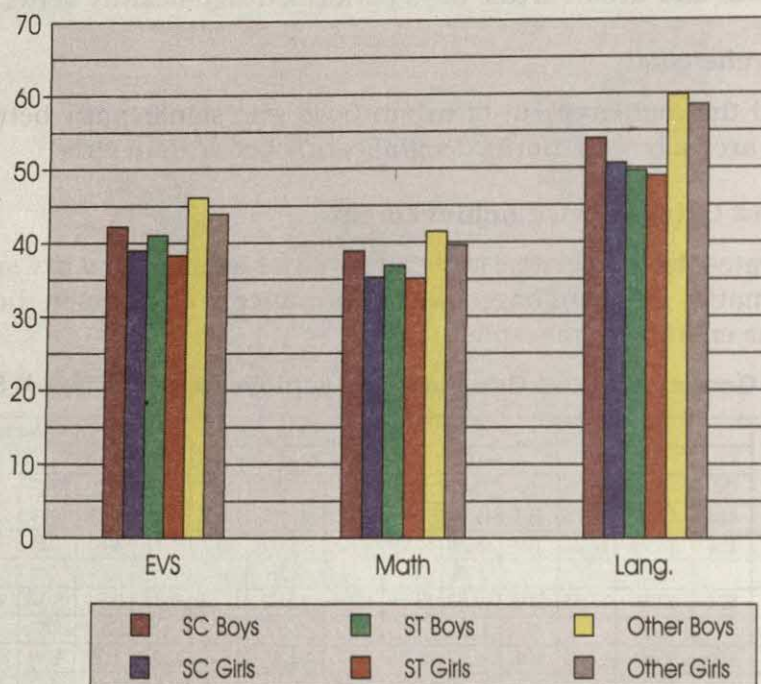
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	CR	CR	CR	CR	CR	CR
EVS	Boys	410	42.21	17.75	101	41.04	17	837	46.15	18.03	3.94	3.66	5.11	2.83	-1.17	-0.61
	Girls	414	38.98	17.21	107	38.29	14.29	872	43.89	16.7	4.91	4.83	5.6	3.75	-0.69	-0.43
	Diff.		3.23			2.75			2.26							
	Total	824	40.59	17.55	208	39.63	15.69	1709	45.00	17.39	4.41	5.94	5.37	4.6	-0.96	-0.77
	CR Value		2.65			1.26			2.69							
Mathematics	Boys	410	36.84	17.84	101	36.87	14.05	837	41.46	16.71	4.62	4.39	4.59	3.03	0.03	0.02
	Girls	414	35.27	15.98	107	35.12	14.39	872	39.62	16.91	4.35	4.48	4.5	2.99	-0.15	-0.09
	Diff.		1.57			1.75			1.84							
	Total	824	36.05	16.94	208	35.97	14.22	1709	40.52	16.83	4.47	6.23	4.55	4.27	-0.08	-0.07
	CR Value		1.45			0.89			2.26							
Language	Boys	410	53.98	18.48	101	49.6	18.36	837	59.87	16.85	5.89	5.44	10.27	5.36	-4.38	-2.14
	Girls	414	50.65	17.16	107	48.9	14.49	872	58.49	17.13	7.84	7.66	9.59	6.33	-1.75	-1.07
	Diff.		3.33			0.7			1.38							
	Total	824	52.3	17.9	208	49.24	16.45	1709	59.17	17	6.87	9.2	9.93	8.19	-3.06	-2.35
	CR Value		2.69			0.30			1.68							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that the achievement of others category students was better than SC followed by ST students and differences in achievement were significant between Others vs SC and Others vs ST. The performance of boys of other category was significantly better than SC boys. In case of girls, differences in achievement were significant between Others vs ST and Others vs SC favouring Others in both cases. In Others and SC category, boys performed significantly better than girls.

Mathematics

The data reveals that the achievement of others students was better than SC followed by ST students and differences in achievement were significant between Others vs SC and Others vs ST. In case of boys, the differences in achievement were significant between Others vs SC and Others vs ST favouring Others, respectively. Same was the case with achievement of girls. In SC and Others categories, boys performed significantly better than girls.

Language

The data reveals that the achievement of Others students was better than SC followed by ST students and differences in achievement were significant between Others vs SC and ST vs SC. In case of boys, the differences in achievement were significant between Others vs SC, favouring Others. In case of girls, differences in achievement were significant between Others vs SC and Others vs ST favouring Others and ST, respectively. In SC and Others categories boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	410	58.25	19.87	101	53.98	18.78	837	63.98	18.1	5.73	4.92	10	5.07	-4.27	-2.02
	Girls	414	55.12	18.88	107	52.49	15.66	872	62.4	19.13	7.28	6.43	9.91	6.02	-2.63	-1.48
	Diff.		3.13			1.49			1.58							
	Total	824	56.68	19.43	208	53.21	17.22	1709	63.17	18.64	6.49	7.98	9.96	7.8	-3.47	-2.53
	CR Value		2.32			0.62			1.75							
Reading Comprehension	Boys	410	46.85	20.72	101	42.31	21.26	837	53.02	19.94	6.17	5	10.71	4.81	-4.54	-1.93
	Girls	414	43.19	19.38	107	42.93	17.28	872	51.99	19.06	8.8	7.65	9.06	5.06	-0.26	-0.14
	Diff.		3.66			-0.62			1.03							
	Total	824	45.01	20.13	208	42.63	19.27	1709	52.49	19.49	7.48	8.85	9.86	6.96	-2.38	-1.58
	CR Value		2.62			-0.23			1.09							

The data reveals that achievement of Others students was better than SC followed by ST students and the differences in achievement were significant between Others vs SC, Others vs ST and ST vs SC. The performance of boys of Other category was significantly better than SC boys. In case of girls, differences in achievement were significant between Others vs SC and Others vs ST respectively. In SC and Others categories, boys performed significantly better than girls.

Reading Comprehension

The data reveals that the achievement of total students as well as boys and girls of other category was better than their counterparts in SC followed by ST category and differences in achievement were significant between Others vs SC and Others vs ST. There was no significant difference in achievements of boys and girls within categories.

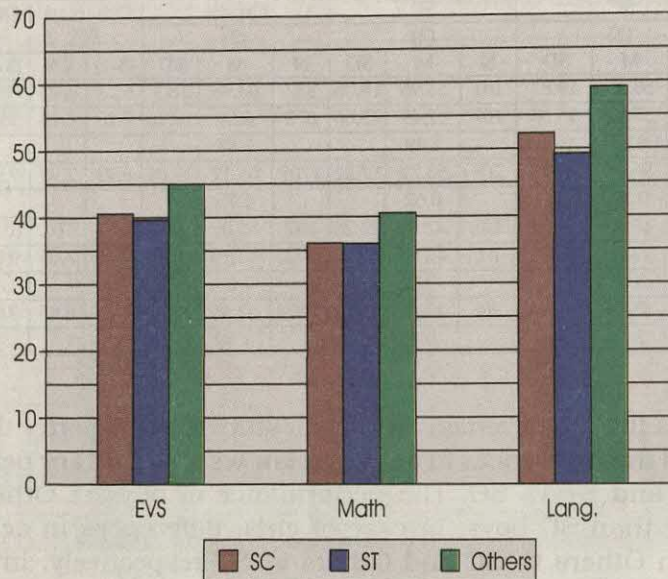
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

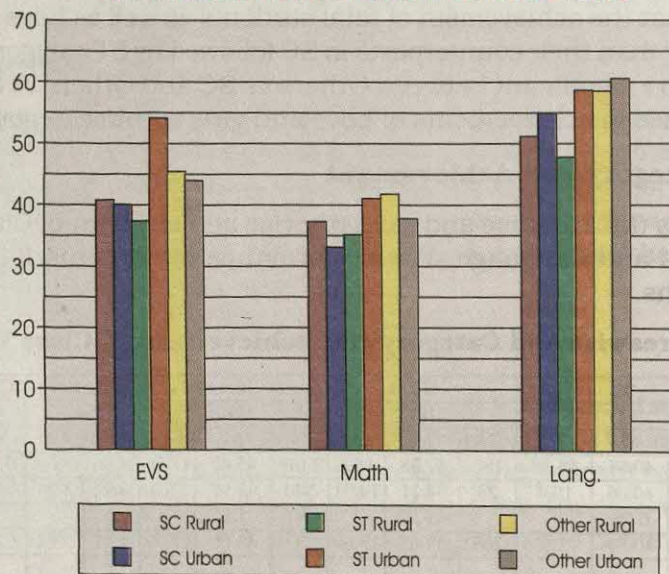
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	579	40.81	18.39	180	37.38	13.8	1169	45.47	17.86	4.66	5.03	8.09	7.01	-3.43	-2.68
	Urban	245	40.06	15.4	28	54.11	19.31	540	43.97	16.3	3.91	3.24	-10.14	-2.73	14.05	3.72
	Diff.		0.75			-16.73			1.5							
	Total	824	40.59	17.55	208	39.63	15.69	1709	45.00	17.39	4.41	5.94	5.37	4.6	-0.96	-0.77
	CR Value		0.60			-4.41			1.33							
Mathematics	Rural	579	37.29	17.88	180	35.18	13.89	1169	41.79	17.27	4.5	5.01	6.61	5.74	-2.11	-1.66
	Urban	245	33.13	14.09	28	41.07	15.47	540	37.79	15.51	4.66	4.16	-3.28	-1.09	7.94	2.6
	Diff.		4.16			-5.89			4							
	Total	824	36.05	16.94	208	35.97	14.22	1709	40.52	16.83	4.47	6.23	4.55	4.27	-0.08	-0.07
	CR Value		3.56			-1.90			4.78							
Language	Rural	579	51.18	17.98	180	47.78	16.05	1169	58.52	17.13	7.34	8.16	10.74	8.28	-3.4	-2.41
	Urban	245	54.95	17.46	28	58.66	16.15	540	60.57	16.66	5.62	4.24	1.91	0.61	3.71	1.14
	Diff.		-3.77			-10.88			-2.05							
	Total	824	52.3	17.9	208	49.24	16.45	1709	59.17	17	6.87	9.2	9.93	8.19	-3.06	-2.35
	CR Value		-2.81			-3.32			-2.34							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas, achievement of Others students was better than SC followed by ST students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC and ST vs SC favouring SC in both cases. In SC and other categories, rural students performed significantly better than urban students whereas in ST, urban students performed significantly better than urban students.

Mathematics

The data reveals that in rural areas, differences in achievement were significant between Others vs SC and Others vs ST favouring Others and ST, respectively. In urban areas, Others students performed significantly better than SC. In SC, and other category, rural students performed significantly better than urban students whereas in ST urban students performed significantly better than rural students.

Language

The data reveals that in rural areas, achievement of Other students was better than SC followed by ST students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC. In all categories, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		(2-1)	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	579	55.29	19.13	180	51.71	16.76	1169	62.33	18.76	7.04	7.29	10.62	7.78	-3.58	-2.42
	Urban	245	59.97	19.78	28	62.86	17.31	540	64.99	18.27	5.02	3.37	2.13	0.63	2.89	0.82
	Diff.		-4.68			-11.15			-2.66							
	Total	824	56.68	19.43	208	53.21	17.22	1709	63.17	18.64	6.49	7.98	9.96	7.8	-3.47	-2.53
	CR Value		-3.14			-3.18			-2.77							
Reading Comprehension	Rural	579	44.34	20.2	180	41.22	19.14	1169	52.16	19.52	7.82	7.7	10.94	7.12	-3.12	-1.88
	Urban	245	46.59	19.9	28	51.67	17.93	540	53.21	19.45	6.62	4.35	1.54	0.44	5.08	1.4
	Diff.		-2.25			-10.45			-1.05							
	Total	824	45.01	20.13	208	42.63	19.27	1709	52.49	19.49	7.48	8.85	9.86	6.96	-2.38	-1.58
	CR Value		-1.48			-2.84			-1.04							

The data reveals that in rural areas, achievement of Other students was better than SC followed by ST students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. In all categories, urban students performed significantly better than rural students.

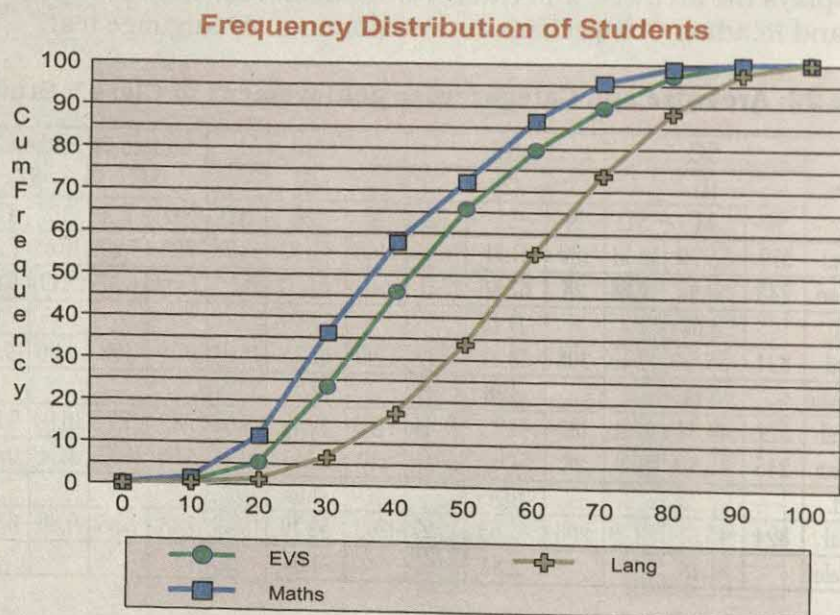
Reading Comprehension

The data reveals that in rural areas, achievement of Others category students was better than SC followed by ST students and differences in achievement were significant across the categories. In urban areas, differences in achievement were significant between Others vs SC. In ST category, urban students performed significantly better than rural students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	14	123	496	620	540	384	273	208	77	6
	cf	14	137	633	1253	1793	2177	2450	2658	2735	2741
	cf(%)	0.51	5.00	23.09	45.71	65.41	79.42	89.38	96.97	99.78	100
Math	f	40	275	673	591	396	396	245	95	26	4
	cf	40	315	988	1579	1975	2371	2616	2711	2737	2741
	cf(%)	1.46	11.49	36.05	57.61	72.05	86.50	95.44	98.91	99.85	100
Language	f	6	27	147	290	452	591	506	402	252	68
	cf	6	33	180	470	922	1513	2019	2421	2673	2741
	cf(%)	0.22	1.20	6.57	17.15	33.64	55.20	73.66	88.33	97.52	100



The figures posted in Table 23 reveals that in all three subjects the distribution of scores covered the entire range from 0-100 per cent. The least number of cases in EVS (6), Mathematics (4) and in Language (6) were in the range 90-100 per cent, 90-100 per cent and 0-10 per cent, respectively. The maximum number of cases in EVS (620), in mathematics (673) and Language (591) were in the range of 30-40 per cent, 20-30 per cent and 50-60 per cent, respectively. Further, 34.59% students in EVS, 27.95% in mathematics and 66.36% in Language scored more than 50% marks whereas 20.58% in EVS, 13.5% in Mathematics and 44.80% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	2	2	7
25 to less than 50	Difficult	25	11	24
50 to less than 75	Average	13	22	7
75 to 100	Very Easy	0	5	0

5% items in EVS and Language and 18% items in Mathematics were found very difficult. About 62% items in EVS and Math and 28% items in Language were difficult. However, nearly 32% in EVS, 55% items in Language and 18% items in Mathematics belonged to the category of average. No item in EVS and Math and only 12% items in Language were found very easy.

Table 25: Distribution of Test Items according to DI

Range of Values	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	35	38	31
Less than .30	Poor Discrimination	5	2	7

No item in any subject had good D.I. i.e., more than 0.70. About 90% items in EVS and Language and 77% items in Mathematics had average value of D.I. However, nearly 15% items in EVS and Math and 5% item in Language were very easy, hence these were very poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.78	0.83
2	Mathematics	38	0.65	0.82
3	Language	40	0.77	0.84

The split half reliability co-efficient for EVS, Mathematics and Language were 0.78, 0.65 and 0.77, respectively.

Impact of Intervening Variables

School Related Variables

The participation of community through Village Education Committee, Area Education Committee and School Management Committee and Parent Teacher Association of school and number of working days influence the learning achievement of children in EVS, Mathematics and language. The positive association of the variable community with the criteria indicates that active involvement of the

community through various committees have also helped the children in improving their learning achievement in the three subjects. Physical facilities and working days of school have also helped the children in improving their learning. However, availability of competency-based textbooks did not help the children in improving their language skills. This phenomenon also suggests that the teachers may not be well-trained to use competency-based textbooks in language. Pupil-teacher ratio is negatively associated with the achievement of children in EVS, Mathematics and Languages, indicating that higher the number of children per teacher, lower the achievement in these subjects and vice-versa. It is universally true, that lower the pupil-teacher ratio, better the learning in children.

Table 27: Regression and Correlation Co-efficient of the Predictors of School-related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	50.295	-----	47.212	-----	55.923	-----
PTR	-0.093	-0.093	-0.097	-0.205	-0.094	-0.017
Com Participation	2.483*	0.204**	2.420*	0.212*	3.065*	0.247**
Teach-aid	0.144	0.065	0.270	0.083	0.338	0.158**
Physical facility	1.183*	0.103**	0.910	0.098	1.711*	0.223**
Ancillary facility	0.046	0.044	0.012	0.071	0.064	0.154*
Instructional time	0.040	0.018	0.068	0.019	0.019	0.051*
Working day	0.083*	0.093*	0.095*	0.022**	0.074*	0.096**
Index-Comp. TLM	0.230	0.003	0.224	0.012	-0.034	-0.066
R²	0.106		0.124		0.197	

*Significant at 0.05 level **Significant at 0.01 level

The set of predictors independently explain 10.6% of total variance in EVS, 12.4% in Mathematics and 19.7% in Language.

Teacher Related Variables

Help from the school organisation i.e., head of institution, senior teachers, cluster and block resource coordinators, BEO/DEO/AIOS, DIET faculty influence the learning achievement of children significantly in Mathematics. The positive association of school organisation with the criterions indicates that the active involvement of school functionaries in academic matters improve the learning achievement of children. Use of teaching aids, i.e. teacher's guides, reference books, science and mathematics kits etc. have also helped the teacher in improving the learning achievement of children in EVS and Mathematics. The positive association of teaching experience and teachers' training with the learning achievement of children indicates that teacher's training programmes and the teaching experience of teachers help the children in improving their skills in EVS and Mathematics only.

Table 28: Regression and Correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	46.606	-----	35.495	-----	54.624	-----
Index-Qualification	0.385	0.049	0.026	0.024	1.924*	0.103**
Index-Experience	0.025*	0.012*	0.054**	0.031*	0.072	0.001
Index-Teaching Aid	3.945*	0.106*	5.297**	0.156**	3.052	0.092
Index-School Org.	0.319	0.062	0.644	0.136*	0.366	0.071
R²	0.034		0.077		0.036	

*Significant at 0.05 level **Significant at 0.01 level

The Predictors explain 3.4% of total variance in EVS, 7.7% in mathematics and 3.6% in language independently.

Pupil Related Variables

Teaching-learning processes adopted by teachers in schools and educational and occupational status of parents influence the learning achievement of children in EVS, Mathematics and Language. The positive association of these three variables with the criterions indicates that the active involvement of teachers in school and parents at home help the children in improving their learning skills in the three subjects. However, the children in higher age group scores poorly as this variable is negatively associated with the criterions. The negative association with detention indicates that detained students performed poorly in the class.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil-related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	52.648	-----	45.047	-----	66.717	-----
Index-Ed & Occu	2.953**	0.153**	2.313**	0.140**	4.345**	0.227**
Index-Schooling	0.305**	0.010	0.036	0.035	0.412	0.085**
Index-TLP	6.717**	0.219**	6.131**	0.213**	7.158**	0.0242**
Age	-1.132**	-0.097**	-1.311**	-0.108**	-1.031*	-0.017**
Detention	-0.576*	-0.055**	-0.327	-0.040	-1.087**	-0.090**
Attendance	0.036*	0.053**	0.100**	0.112**	0.020	0.029
R²	0.071		0.074		0.103	

*Significant at 0.05 level **Significant at 0.01 level

The set of predictors explain 7.1% of total variance in EVS, 7.4% in Mathematics and 10.3% in Language, independently.

One can infer from the above analysis that active involvement of teachers in class and parents at home, attending school regularly by children, active involvement of community and senior functionaries in school help the children in improving the learning achievement of children in three subjects.

Hard Spot of Learning

In EVS, question number 12 and 21 were found very difficult and 25(68%) items were found difficult. The hard spots were found in almost all units.

In Language, question number 38 and 39 were found very difficult and 11 (28%) items were found difficult. The hard spots were: structure, comprehension of instructions, time table and story.

In Mathematics, 7 (18%) items were found very difficult and 24 (62%) items were found difficult. The hard spots were: fraction, decimals, measurement/area and geometry.

FINDINGS

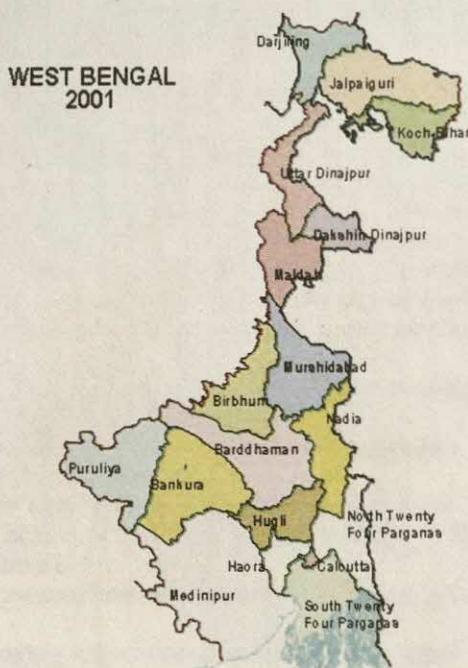
Analysis of the results signified that

- Musical instruments were available approximately in 29% schools.
- TV and computer were available in very few schools.
- More textbooks, workbooks and teachers' handbooks, teaching aids were available for primary classes in 2001 as compared to year 1998.
- More students were getting the benefit under mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 224.
- Almost 90% schools in rural areas were having Village Education Committees.
- AEC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Percentage of female teachers was higher than male teachers.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- More degree holder male teachers studied Mathematics, Language and Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 87% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET.
- Maximum in-service training programmes were conducted on 'Activity-based Joyful learning and minimum on 'Production of Instructional Material', during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 41% teachers have not attended any in-service training programme during last three years.
- Percentage of female teachers who had not attended any training programme was more than their counterparts in irrespective of areas.
- Majority of mothers were housewives and fathers were farmers.
- No mother was employer in urban areas.
- In most of cases teachers were getting assistance always from 'Head of Schools'.
- For approximately 90% students, medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general educational qualification of mothers was poorer than fathers.
- Approximately, 93% students were attending schools above 70% working days.
- Approximately, less than 4% students were attending schools below 60% of the total working days.
- Urban students performed significantly better than rural students in Language. However, rural students performed significantly better than urban students in Mathematics.

- Boys were performed significantly better than girls in all the three subjects.
- Students from Others category performed significantly better than ST and SC categories in all the three subjects.
- 2.5% students scored between 90-100% in Language only.
- Active involvement of teachers in class and parents at home, active involvement of community and senior officers of school organisation helped the children in improving their learning achievement in the three subjects.

INTRODUCTION

West Bengal emerged out of the partition of Bengal Province as a consequence of bifurcations of British India into two countries, namely India and Pakistan. Educational system prevailing in the state of West Bengal may be traced back since the achievement of Independence in 1947. The Government of West Bengal has always been on the pursuit of spreading education into the lowest level of the social stratum since independence. There are 18 districts in the state.



The West Bengal Government had a massive literacy programme throughout the state during eighties with high success literacy rate, especially for female. Literacy rate prevailing in West Bengal is 75% (approx.). The state have 49,747 primary schools (Class I – IV) having 1,81,197 teachers. The drop out rate have come down to 15% from 18%.

Sample

The information collected from sampled schools, teachers and students through various questionnaires developed for the achievement survey is presented as under:

Schools

A total of 196 schools were sampled from Kolkata, North 24 Parganas, Purulia and Jalpaiguri districts of West Bengal. Out of total sampled schools, 50 schools were from Kolkata, 46 from North 24 Parganas, 50 from Purulia and remaining 50 from Jalpaiguri.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt.		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	120	120	100	0	0	0	0
Urban	76	76	100	0	0	0	0
Total	196	196	100	0	0	0	0

Teachers

A total of 577 teachers were sampled from 196 sampled schools. Out of 577 teachers, 360 were male teachers and 217 were female teachers. Areawise, 349 teachers were from rural areas and 228 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Table 2: Category of Teachers										
Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	71	25.82	13	4.73	30	10.91	161	58.55	275
	Female	11	14.86	3	4.05	4	5.41	56	75.68	74
	Total	82	23.5	16	4.58	34	9.74	217	62.18	349
Urban	Male	7	8.24	4	4.71	9	10.59	65	76.47	85
	Female	17	11.89	4	2.8	4	2.8	118	82.52	143
	Total	24	10.53	8	3.51	13	5.7	183	80.26	228
Total	Male	78	21.67	17	4.72	39	10.83	226	62.78	360
	Female	28	12.9	7	3.23	8	3.69	174	80.18	217
	Total	106	18.37	24	4.16	47	8.15	400	69.32	577

Table 2 shows that the percentage of male teachers was higher than female teachers in case of categories except Others. However, in urban areas percentage of male teacher of Schedule Caste category was more than female teacher.

Students

A total number of 4,739 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Kolkata	Rural	16	0	16
	Urban	617	736	1353
	Total	633	736	1369
North 24 Parganas	Rural	425	407	832
	Urban	101	149	250
	Total	526	556	1082
Purulia	Rural	571	298	869
	Urban	91	87	178
	Total	662	385	1047
Jalpaiguri	Rural	503	513	1016
	Urban	107	118	225
	Total	610	631	1241
Total	Rural	1515	1218	2733
	Urban	916	1090	2006
	Total	2431	2308	4739

Out of 4,739 students, 2,733 students were from rural areas and remaining 2,006 students were from urban areas. Out of the total sample, 2,431 were boys and 2,308 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	0	0	14	11.67	28	23.33	47	39.17	31	25.83
Urban	0	0	12	15.79	4	5.26	16	21.05	44	57.89
Total	0	0	26	13.27	32	16.33	63	32.14	75	38.27

Table 4 indicates that out of 120 rural sampled schools, 11.67% were Primary Schools, 23.33% Elementary, 39.17% Secondary and 25.85% Sr. Secondary schools.

Facilities related to teaching-learning process

It was observed that maps and globes were available in 95% and 94% schools. Magazines, journals and newspaper and maths kit were available in 63% to 69% schools. Reference books, dictionaries, encyclopedia, and game equipments were available in 87% to 89% schools. Mini tool kit was available in only 26% schools. However, primary science kit were available in 53% schools.

Infrastructural facilities

It was observed that school bell, blackboard, chalk and duster and chairs and tables for teachers were available in above 97% and more schools, whereas, pin-up board/notice boards and water pitcher were available in 82% to 84% schools. Play ground was available in 78% schools. However, musical instruments were available in only 51% schools.

Ancillary Facilities

TV was available in only 5% schools. Separate toilet for girls were available in 76% schools each. Computer, annual medical check-up for children, and immunisation facilities were available in 23% to 27% schools. Besides, first aid kit, safe drinking water and toilet facilities were available in 80% to 89% schools.

Competency-Based Teaching Materials

Information gathered shows that out of 196 schools, competency-based textbooks were available in more schools than workbooks, teachers' handbook and teaching aids. Teachers' handbook were available in lesser number of schools as compared with remaining. However, workbooks and teaching aids were available in approximately same number of schools.

Incentive Scheme

The Table 5 depicts the category-wise and gender-wise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	6255	5246	1278	981	1197	551	5489	5771	14219	12549
	%	43.99	41.80	8.99	7.82	8.42	4.39	38.60	45.99	100	100
Free uniform	N	0	664	0	101	0	55	0	209	0	1029
	%	0	64.53	0	9.82	0	5.34	0	20.31	0	100
Free textbooks	N	6685	5665	1592	1204	1424	909	9286	8416	18987	16194
	%	35.21	34.98	8.38	7.43	7.50	5.61	48.91	51.97	100	100
Scholarship for regular attendance	N	393	19	109	17	0	5	4	10	506	51
	%	77.67	37.25	21.54	33.33	0	9.80	0.79	19.61	100	100
Other Schemes	N	216	45	247	4	0	0	2	6	465	55
	%	44.30	81.82	53.12	7.27	0	0	0.43	10.91	100	100

Various schemes like mid-day meal, free uniform, free textbooks and scholarship for regular attendance were available to both boys and girls across the categories. In case of mid-day meal, boys (43.99%) from SC and (38.60%) from Others category and girls (41.80%) from SC and (45.99%) from Others category were more benefited. However, free uniforms were available only to girls from all categories. Free textbooks were available to girls both from SC and Others Categories. But, scholarship and other schemes were available to both boys and girls from SC and ST categories.

Instructional Time

Average number of working days in schools was approximately 218. Days on an average, schools were having 6 periods in a day of approximately 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 196 sampled schools, 59(30.1%) schools were having Village Education Committees (VEC). School Management Committee was observed in 173(88.27%) schools and Area Education Committee was observed in only 9 (4.59%) schools. Further, VEC, AEC and SMC were found more in schools located in rural areas than schools in urban areas.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	51	8	59
	%	42.5	10.53	30.1
AEC	N	7	2	9
	%	5.83	2.63	4.59
SMC	N	106	67	173
	%	88.33	88.16	88.27
PTA	N	32	21	53
	%	26.67	27.63	27.04

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	120	760	76.92	228	23.08	988	8	43
Urban	76	525	50.58	513	49.42	1038	14	40
Total	196	1285	63.43	741	36.57	2026	10	42

Table 8 shows that overall number of male teachers was more than female teachers. The average number of teachers per school in rural and urban areas was 8 and 14. Further, average pupil-teacher ratio was 42:1. However, this ratio was approximately 43:1 in rural schools.

Educational Qualification

The percentage of female teachers holding PG degree were more than male teachers. This trend was reverse for teacher holding graduation degree. Further, percentage of female teachers who studied upto secondary level was lower than their counterparts. However, percentage of female teacher who had passed Class X was more than male teachers. Besides, less than 1% teachers were below Class X level. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	1	0.28	12	3.33	19	5.28	211	58.61	117	32.5	360
Female	1	0.46	9	4.15	8	3.69	115	53	84	38.71	217
Total	2	0.35	21	3.64	27	4.68	326	56.5	201	34.84	577

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	31	8.61	145	40.28	68	18.89	116	32.22	360
	Female	16	7.37	107	49.31	42	19.35	52	23.96	217
	Total	47	8.15	252	43.67	110	19.06	168	29.12	577
Science	Male	33	9.17	134	37.22	34	9.44	159	44.17	360
	Female	19	8.76	103	47.47	15	6.91	80	36.87	217
	Total	52	9.01	237	41.07	49	8.49	239	41.42	577
Language(Medium)	Male	5	1.39	35	9.72	171	47.5	149	41.39	360
	Female	5	2.3	14	6.45	87	40.09	111	51.15	217
	Total	10	1.73	49	8.49	258	44.71	260	45.06	577
Social Science	Male	45	12.5	151	41.94	63	17.5	101	28.06	360
	Female	22	10.14	100	46.08	26	11.98	69	31.8	217
	Total	67	11.61	251	43.5	89	15.42	170	29.46	577

The data reveals that in Mathematics and Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this was reverse in case of Science and Social Science. The percentage of male teachers who studied Science Language and Social Science upto higher secondary level was more than female teachers. The trend was reverse at secondary level for Mathematics, Science and Social Science. Besides, the percentage of male teachers who studied Mathematics, Science and Social Science below Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/Certificate in Primary/Elem. Education	B.Ed.	M.Ed.
196	Male	49	257	13
	Female	39	152	8
	Total	88	409	21

Approximately, $1/5^{\text{th}}$ of the sampled teachers had diploma/certificate in Primary/Elementary Education and very few teachers were having M.Ed degree. Besides, approximately, $4/5^{\text{th}}$ female teachers had B.Ed.

Availability of Teaching Aids

Information gathered illustrates that all teaching aids were available to more than 85% teachers in urban schools except others and also to more than 85% teachers in rural schools except science kit and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
School Complex	N	1
	%	0.17
Block Resource Centre	N	1
	%	0.17
Teacher Resource Centre	N	6
	%	1.04
Cluster Resource Centre	N	23
	%	3.99
DIET	N	0
	%	0
SCERT	N	10
	%	1.73
Others	N	20
	%	3.47

The in-service training programmes were organised in the various institutions in the districts during last three years and teachers from both rural and urban areas attended the same. Few teachers attended the programme conducted by Cluster Resource Centre and SCERT.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	4
Content Enrichment	22
Production of Instructional Material	11
Use of Instructional Material	11
Assessment of Pupil Learning	0
Competency based Teaching Learning	7
Activity based Joyful Learning	3
Others	14

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Content Enrichment'. Minimum programmes were conducted on 'Activity-Based Joyful Learning'. No programme was conducted on 'Assessment of Pupil's Learning'.

Out of 577 sampled teachers, 213(88.91%) were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was nearly the same. The same was also true for both urban and rural areas teachers. However, percentage of female teachers in urban schools and male teacher in rural schools was more than their counterparts in the respective areas.

The effectiveness of various training programmes is given in Table 13 :

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	33	19	25	20
	%	51.56	29.69	39.06	31.25
Average	N	30	45	36	43
	%	46.87	70.31	56.25	67.19
Low	N	1	0	3	1
	%	1.56	0	4.69	1.56

It is evident that approximately 47% training programmes were 'Average' effective in terms of utility of knowledge gained during training programmes. Approximately, 52% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 56% to 70% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 30% to 39% teachers.

Academic Assistance received from Various Sources

Information collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 91% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	155	3.27	98	2.07
Illiterate	389	8.21	1065	22.47
Literate	442	9.33	559	11.80
Primary	670	14.14	596	12.58
Secondary	1496	31.57	1312	27.69
Sr. Secondary	358	7.55	272	5.74
Degree and above	892	18.82	532	11.23
Donot Know/Cannot say	337	7.11	305	6.44

Table 14 indicates that approximately 8% father and 22% mother of the students were illiterate. Only 19% father and 11% mother were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	88	59	147	83	142	225
Household/ Housewife	28	6	34	2113	1551	3664
Farmer	841	28	869	51	8	59
Poultry farming	13	6	19	0	0	0
Agricultural labour	279	16	295	63	3	66
Picking forest produce	10	1	11	0	1	1
Domestic Servent	3	2	5	174	68	242
Street Vender	43	27	70	6	6	12
Manual unskilled worker	223	211	434	58	52	110
Skilled worker	296	262	558	41	14	55
Clerical worker	71	325	396	8	24	32
Shopkeeper	200	167	367	4	7	11
Employer	247	353	600	4	17	21
Manager/Senior Officer	232	444	676	27	88	115
Others	159	99	258	101	25	126

In rural areas, majority of mothers were housewives and fathers were farmers. In urban areas, majority of mothers were housewives and fathers were manager/senior officer. Number of Manager/Senior Officers fathers were more than mothers. In decreasing order, father were working as farmer, manager/senior officer, employer, skilled worker, manual unskilled worker, clerical worker and agricultural labour etc. In decreasing order, mothers, were working as household/housewives, domestic servant, others, manager/senior officer, manual unskilled worker, farmer and skilled worker.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	575	544	567	623	1142	1167
	%	37.95	44.66	61.9	57.16	46.98	50.56
Mother	N	352	344	614	692	966	1036
	%	23.23	28.24	67.03	63.49	39.74	44.89
Elder Brother/Sister	N	460	359	193	244	653	603
	%	30.36	29.47	21.07	22.39	26.86	26.13
Others	N	132	137	90	162	222	299
	%	8.71	11.25	9.83	14.86	9.13	12.95

Girls and boys, in rural, as well as overall were getting more help from father/guardian than any other. However, in urban areas both boys and girls were getting more academic assistance from mother. The descending order of academic assistance

provided by the family members was father, elder brother and sister and mother for over all and rural schools. But for urban areas it was mother, father/guardian and elder brother/sister.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. It is also true for 80-90% of working days only 5% percent boys and girls were attending schools less than 60% of total working days. Approximately, 78% students were attending school for more than 70% of working days.

Students Achievement

This section presents that the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in West Bengal. The language test has two components, namely Grammar and Usage, and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

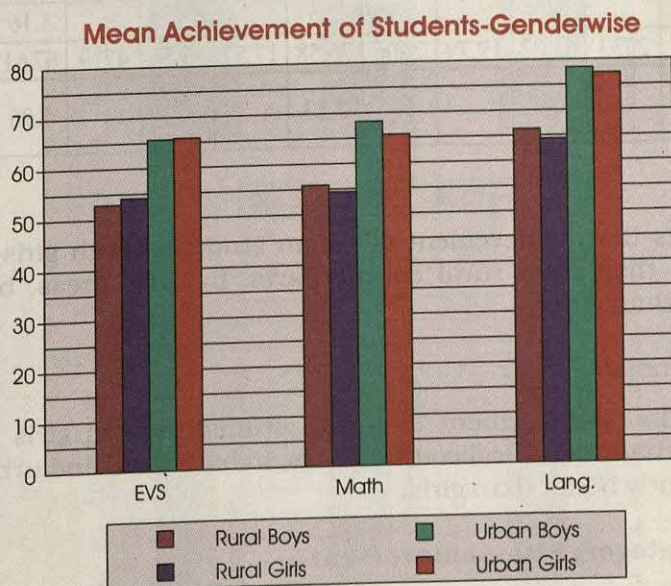
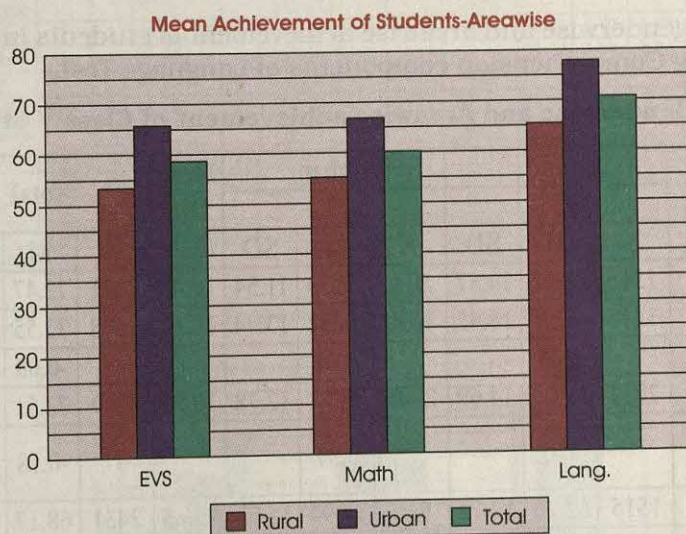
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	1515	52.89	19.63	916	65.66	17.67	12.77	2431	57.71	19.9	16.55
	Girls	1218	54.1	20.63	1090	65.84	20.6	11.74	2308	59.64	21.43	13.66
	Diff.		-1.21			-0.18				-1.93		
	Total	2733	53.43	20.09	2006	65.76	19.31	12.33	4739	58.65	20.68	21.35
	CR Value		-1.56			-0.21				-3.21		
Mathe- matics	Boys	1515	55.79	20.32	916	68.29	19.48	12.5	2431	60.5	20.9	15.08
	Girls	1218	54.41	22.02	1090	65.62	22.57	11.21	2308	59.7	22.97	12.05
	Diff.		1.38			2.67				0.8		
	Total	2733	55.18	21.1	2006	66.84	21.25	11.66	4739	60.11	21.94	18.72
	CR Value		1.69			2.84				1.25		
Langu- age	Boys	1515	66.27	14.68	916	78.43	11.65	12.16	2431	70.86	14.84	22.56
	Girls	1218	64.3	14.36	1090	77.36	14.43	13.06	2308	70.47	15.8	21.76
	Diff.		1.97			1.07				0.39		
	Total	2733	65.4	14.57	2006	77.85	13.24	12.45	4739	70.67	15.31	30.64
	CR Value		3.53			1.84				0.87		

Environmental Studies

The data given in Table 17 reveals that girls performed significantly better than boys. The achievement of urban students, both boys and girls, was significantly better than their rural counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.



Mathematics

The data reveals that achievement of urban students, both girls and boys was significantly better than their rural counterparts. In urban areas, boys performed significantly better than girls.

Language

The data reveals that achievement of urban students, both girls and boys was significantly better than their rural counterparts. In rural areas, boys performed significantly better than girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Gram- mar & Usage	Boys	1515	68.68	14.87	916	78.73	11.54	10.05	2431	72.47	14.55	18.62
	Girls	1218	67.2	14.42	1090	78.52	13.74	11.32	2308	72.55	15.19	19.3
	Diff.		1.48			0.21				-0.08		
	Total	2733	68.02	14.69	2006	78.61	12.78	10.59	4739	72.51	14.86	26.44
	CR Value		2.63			0.37				-0.18		
Compre- hension	Boys	1515	62.26	19.72	916	77.94	15.93	15.68	2431	68.17	19.89	21.46
	Girls	1218	59.47	19.78	1090	75.44	18.77	15.97	2308	67.01	20.88	19.89
	Diff.		2.79			2.5				1.16		
	Total	2733	61.02	19.79	2006	76.58	17.57	15.56	4739	67.61	20.39	28.54
	CR Value		3.67			3.23				1.96		

The data reveals that achievement of urban students, both girls and boys was significantly better than their rural counterparts. In rural areas, boys performed significantly better than girls.

Reading Comprehension

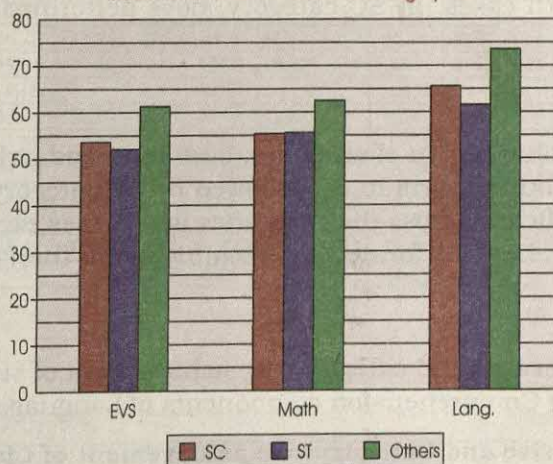
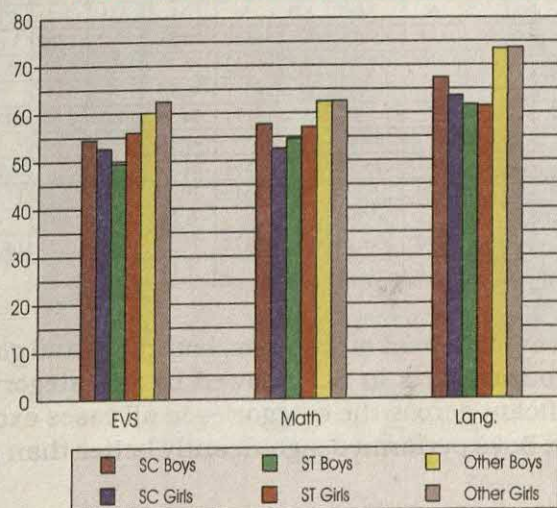
The data reveals that achievement of urban students, both girls and boys was significantly better than their rural counterparts. In both rural and urban areas, boys performed significantly better than girls.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	712	54.42	20.16	161	49.46	18.43	1558	60.06	19.49	5.64	6.25	10.6	6.91	-4.96	-3.03
	Girls	586	52.62	21.45	109	55.94	20.33	1613	62.44	20.88	9.82	9.56	6.5	3.23	3.32	1.55
	Diff.		1.8			-6.48			-2.38							
	Total	1298	53.61	20.76	270	52.07	19.44	3171	61.27	20.24	7.66	11.28	9.2	7.44	-1.54	-1.17
	CR Value		1.55			-2.67			-3.32							
Mathematics	Boys	712	57.68	21.26	161	54.59	21.66	1558	62.4	20.41	4.72	4.97	7.81	4.38	-3.09	-1.64
	Girls	586	52.58	23.19	109	57.03	20.95	1613	62.47	22.45	9.89	8.92	5.44	2.61	4.45	2
	Diff.		5.1			-2.44			-0.07							
	Total	1298	55.38	22.29	270	55.58	21.37	3171	62.43	21.47	7.05	9.7	6.85	5.05	0.2	0.14
	CR Value		4.09			-0.93			-0.09							
Language	Boys	712	67.3	15.23	161	61.63	14.3	1558	73.43	13.98	6.13	9.13	11.8	9.99	-5.67	-4.49
	Girls	586	63.52	15.66	109	61.4	13.94	1613	73.61	14.91	10.09	13.53	12.21	8.81	-2.12	-1.43
	Diff.		3.78			0.23			-0.18							
	Total	1298	65.59	15.54	270	61.54	14.13	3171	73.52	14.46	7.93	15.8	11.98	13.35	-4.05	-4.21
	CR Value		4.38			0.13			-0.35							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data reveals that performance of students of Others category was better than SC followed by ST and the differences in achievement were significant between Others vs SC and Others vs ST. In case of boys, performance of Others was better than SC followed by ST and differences in achievement were significant across the categories. In case of girls, differences in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. Within ST and Others categories, girls performed significantly better than boys.

Mathematics

The data reveals that performance of students of Others category was better than ST followed by SC and the differences in achievement were significant between Others vs SC and Others vs ST. In case of girls, performance of Others was better than ST followed by SC and differences in achievement were significant across the categories. In case of boys, difference in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. In SC category, boys performed significantly better than girls.

Language

The data reveals that achievement of students, both boys and girls, of Other category was better than their counterparts in SC followed by ST category and differences in achievement were significant across the categories in all cases except between ST and SC girls. In SC category, boys performed significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	712	69.52	15.03	161	65.07	15.73	1558	74.58	13.7	5.06	7.65	9.51	7.39	-4.45	-3.27
	Girls	586	66.42	15.2	109	64.26	14.12	1613	75.33	14.38	8.91	12.33	11.07	7.91	-2.16	-1.45
	Diff.		3.1			0.81			-0.75							
	Total	1298	68.12	15.18	270	64.74	15.08	3171	74.96	14.06	6.84	13.97	10.22	10.75	-3.38	-3.35
	CR Value		3.68			0.44			-1.50							
Reading Comprehension	Boys	712	63.6	20.42	161	55.9	17.72	1558	71.52	18.93	7.92	8.77	15.62	10.58	-7.7	-4.84
	Girls	586	58.68	21.25	109	56.64	18.85	1613	70.74	19.75	12.06	11.99	14.1	7.53	-2.04	-1.02
	Diff.		4.92			-0.74			0.78							
	Total	1298	61.38	20.93	270	56.2	18.15	3171	71.13	19.35	9.75	14.45	14.93	12.91	-5.18	-4.15
	CR Value		4.22			-0.32			1.14							

The data reveals that achievement of students, both boys and girls, of Other category was better than their counterparts in SC followed by ST category and differences in achievement were significant across the categories in all cases except between ST and SC girls. In SC category, boys performed significantly better than girls.

Reading Comprehension

The pattern of achievement of students in Reading Comprehension was exactly similar as in case of Grammar and Usage.

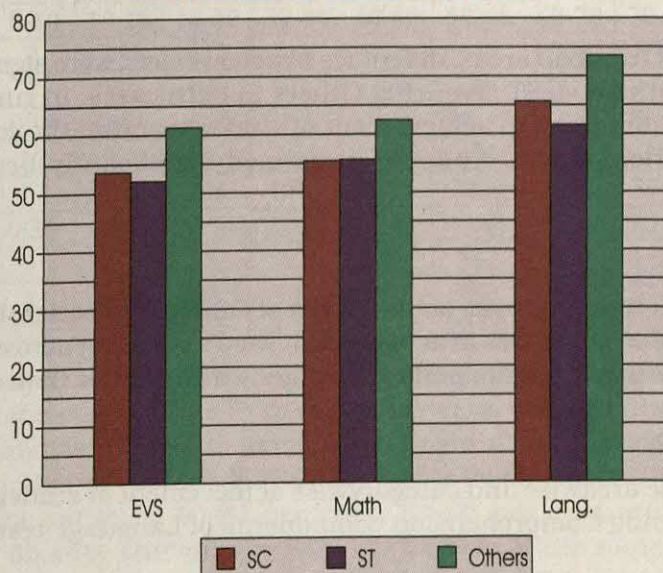
Areawise and Categorywise Achievement

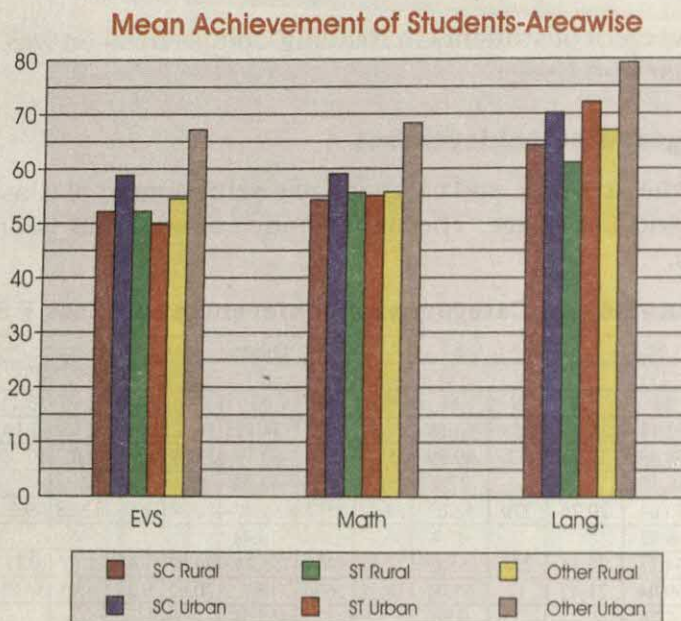
Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	998	52.14	20.85	258	52.18	19.39	1477	54.52	19.62	2.38	2.85	2.34	1.79	0.04	0.03
	Urban	300	58.49	19.73	12	49.79	21.33	1694	67.16	18.89	8.67	7.06	17.37	2.81	-8.7	-1.39
	Diff.		-6.35			2.39			-12.64							
	Total	1298	53.61	20.76	270	52.07	19.44	3171	61.27	20.24	7.66	11.28	9.2	7.44	-1.54	-1.17
	CR Value		-4.82			0.39			-18.41							
Mathematics	Rural	998	54.28	22.44	258	55.6	21.51	1477	55.71	20.07	1.43	1.62	0.11	0.08	1.32	0.87
	Urban	300	59.04	21.42	12	55.04	18.82	1694	68.3	20.92	9.26	6.93	13.26	2.43	-4	-0.72
	Diff.		-4.76			0.56			-12.59							
	Total	1298	55.38	22.29	270	55.58	21.37	3171	62.43	21.47	7.05	9.7	6.85	5.05	0.2	0.14
	CR Value		-3.34			0.10			-17.28							
Language	Rural	998	64.23	15.26	258	61.05	13.84	1477	66.94	13.99	2.71	4.48	5.89	6.3	-3.18	-3.22
	Urban	300	70.12	15.62	12	72.08	16.82	1694	79.26	12.24	9.14	9.63	7.18	1.48	1.96	0.4
	Diff.		-5.89			-11.03			-12.32							
	Total	1298	65.59	15.54	270	61.54	14.13	3171	73.52	14.46	7.93	15.8	11.98	13.35	-4.05	-4.21
	CR Value		-5.76			-2.24			-26.21							

Mean Achievement of Students-Categorywise





Environmental Studies

The data reveals that in rural areas, achievement of Others category was significantly better than SC students. In rural areas, Others performed significantly better than both SC and ST students. In SC and Others categories, urban students performed significantly better than rural students.

Mathematics

The data reveals that in urban areas, difference in achievement were significant between Others vs SC and Others vs ST favouring Others in both cases. In rural areas, there was no significant differences in achievement of students across the categories. In SC and Others categories, urban students performed significantly better than rural students.

Language

The data reveals that in rural areas, achievement of Others was better than SC followed by ST students and the differences in achievement were significant across the categories. Within categories, urban students performed significantly better than rural students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	998	67.03	15.2	258	64.31	14.97	1477	69.34	14.12	2.31	3.82	5.03	5.02	-2.72	-2.59
	Urban	300	71.73	14.54	12	74	15.11	1694	79.87	12.02	8.14	9.16	5.87	1.34	2.27	0.51
	Diff.		-4.7			-9.69			-10.53							
	Total	1298	68.12	15.18	270	64.74	15.08	3171	74.96	14.06	6.84	13.97	10.22	10.75	-3.38	-3.35
	CR Value		-4.86			-2.17			-22.44							
Reading Comprehension	Rural	998	59.57	20.62	258	55.61	17.83	1477	62.95	19.29	3.38	4.1	7.34	6.03	-3.96	-3.08
	Urban	300	67.42	20.87	12	68.89	21.14	1694	78.26	16.36	10.84	8.54	9.37	1.53	1.47	0.24
	Diff.		-7.85			-13.28			-15.31							
	Total	1298	61.38	20.93	270	56.2	18.15	3171	71.13	19.35	9.75	14.45	14.93	12.91	-5.18	-4.15
	CR Value		-5.78			-2.14			-23.19							

The data reveals that in rural areas, achievement of Others was better than SC followed by ST students and the differences in achievement were significant across the categories. Within categories, urban students performed significantly better than rural students.

Reading Comprehension

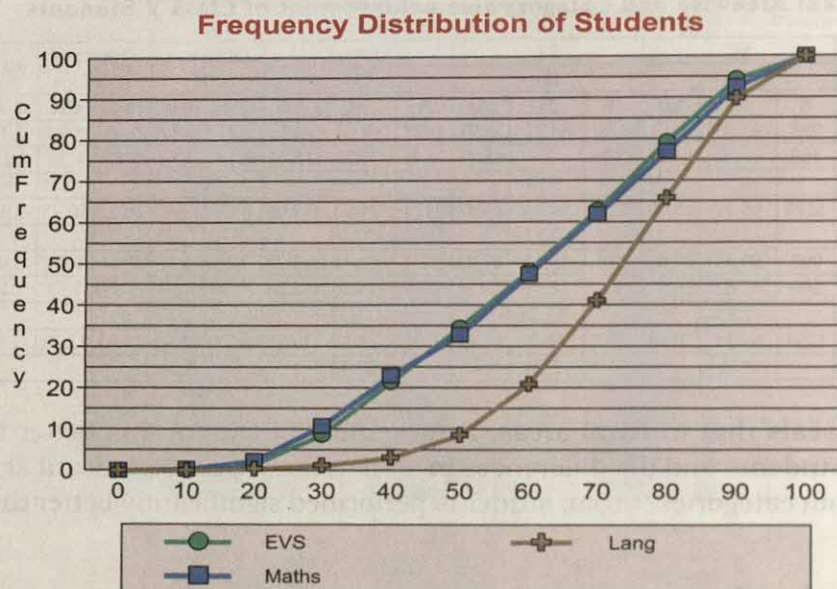
The data reveals that in rural areas, achievement of Others was better than SC followed by ST students and the differences in achievement were significant across the categories. Within categories, urban students performed significantly better than rural students.

Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	7	69	332	604	626	649	691	782	713	266
	cf	7	76	408	1012	1638	2287	2978	3760	4473	4739
	cf(%)	0.15	1.60	8.61	21.35	34.56	48.26	62.84	79.34	94.39	100
Math	f	17	93	399	575	471	694	682	717	739	352
	cf	17	110	509	1084	1555	2249	2931	3648	4387	4739
	cf(%)	0.36	2.32	10.74	22.87	32.81	47.46	61.85	76.98	92.57	100
Language	f	1	21	38	87	261	582	958	1170	1136	485
	cf	1	22	60	147	408	990	1948	3118	4254	4739
	cf(%)	0.02	0.46	1.27	3.10	8.61	20.89	41.11	65.79	89.77	100

The data presented in Table 23 reveals that in all the three subjects the distribution of scores covered the entire range from 0-100 per cent. The least number of cases in EVS (7), in Mathematics (17) and in Language (1) were all in the range of 0-10 per cent. The maximum number of cases in EVS (713), in Mathematics (739) and in Language (1,170) were in the range of 80-90 per cent, 80-90 per cent and 70-80 per cent, respectively. The 65.44% students in EVS, 67.19% in Mathematics and 91.39% in Language scored more than 50% marks whereas 51.74% in EVS, 52.54% in Mathematics and 79.11% in Language scored more than 60% marks.



Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	1	0	2
25 to less than 50	Difficult	10	6	9
50 to less than 75	Average	24	16	20
75 to 100	Very Easy	5	18	7

No item in Language and very few items i.e., 1 and 2 items were found very difficult in EVS and Mathematics, respectively. However, 25% items from EVS, 24% from Mathematics and only 15% items from Language were found difficult. Further, most of the items belonged to average category i.e., 60% items from EVS, 40% items from Language and 53% items from Mathematics, respectively. 45% items from Language were found very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	5	0	5
.30 to less than .70	Average Discrimination	32	27	29
Less than .30	Poor Discrimination	3	13	4

5 items each from EVS and Mathematics had got good D.I. i.e., more than 0.70. In these three subjects, 90% from EVS, 68% from Language and 77% from Mathematics items had average value of D.I. But a good number of items (33%) from Language were found poorly discriminated due to a number of (45%) easy items. The reliability of tests is as given below:

Table 26: Reliability co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.84	0.89
2	Mathematics	38	0.84	0.90
3	Language	40	0.7	0.83

The reliability co-efficient of EVS, Language and Mathematics are very good.

Impact of Intervening Variables

School Related Variables

Physical facilities, ancillary facilities, like safe drinking water, toilet facilities, separate toilet facilities for girls etc., and availability of competency-based teaching learning material influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of these variables with the three criterions indicates that availability of ancillary facilities, and availability of competency-based textbook in school have helped the children in improving their learning achievement in EVS, Mathematics and Language.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	71.504	--	68.962	--	82.101	--
PTR	-0.065	-0.012	-0.050*	-0.046*	-0.046	-0.021
Com Participation	0.700	0.022	0.087	0.012	0.098	0.017
Teach-aid	0.559	0.146	0.358	0.122	0.300	0.080
Physical facility	0.343*	0.203**	0.477	0.192	1.062*	0.323**
Ancillary facility	2.086*	0.253**	1.903*	0.220*	1.780**	0.347**
Instructional time	0.015	0.081	0.056	0.040	0.022	0.013
Working day	0.093	0.108	0.094	0.013	0.080	0.042*
Index-Comp. TLM	4.772*	0.140*	6.174*	0.103*	2.781*	0.128**
R²	0.110		0.100		0.098	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 11.0% of total variance in EVS, 10.0% in Mathematics and 9.8% in Language.

Teacher Related Variables

Teaching aids and teaching styles of teachers, involvement of school organisation and teacher's qualifications influence the learning achievement of children in EVS, Mathematics and Language. The positive association of the variables teaching aids and teaching styles of teachers indicates that availability and use of teaching aids and active involvement of teachers in school enhance the learning achievement of children in the three subjects. The positive association of the variable teaching experience and teacher's training with Mathematics indicates that the teachers, who are teaching mathematics, have helped the children in improving their mathematical skills. The positive association of teacher's qualification with the three subjects indicates that teachers have helped the children in improving the learning skills in the subjects.

Table 28: Regression and Correlation Co-efficient of the Predictors of Teacher related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	62.657	--	68.628	--	76.305	--
Index-Qualification	2.311*	0.119**	2.480*	0.104*	2.897**	0.201**
Index-Experience	0.014	0.016	3.611**	0.063*	0.089	0.050
Index-Teaching Aid	5.394**	0.193**	4.557**	0.156**	2.092**	0.097*
Index-School Org.	0.072*	0.086*	0.131**	0.013**	0.023**	0.023**
R²	0.059		0.062		0.097	

*Significant at 0.05 level

**Significant at 0.01 level

The predictors explain 5.9% of total variance in EVS, 6.2% in Mathematics and 9.7% in Language.

Pupil Related Variables

Teaching-learning processes adopted by teachers in school, percentage attendance of children in school, educational status and occupation of parents, school practices and academic assistance provided by the family members and age of students influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of teaching-learning processes and percentage attendance of students in schools indicates that active involvement of teachers and good percentage of attendance of students in schools enhance the learning achievement of children in the three subjects. However, positive association of educational and occupational status of parents and schooling practices and academic assistance provided by the parents indicates that children, whose parents have higher educational and occupational status and those who receive more academic assistance from family members score high.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	51.444	--	56.080	--	64.016	--
Index-Ed & Occu	7.370**	0.347**	8.094**	0.365**	7.505**	0.466**
Index-Schooling	0.085**	0.084**	0.029*	0.108**	0.987**	0.191**
Index-TLP	6.318**	0.231**	5.474**	0.198**	2.507**	0.150**
Age	-1.086**	-0.140**	-1.494**	-0.158**	-0.539**	-0.141**
Detention	-1.512**	-0.101	2.101**	-0.113**	-0.668	-0.094
Attendance	0.221	0.200**	0.229**	0.202**	0.118**	0.180**
R²	0.185		0.186		0.242	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 18.5% total variance in EVS, 18.6% in Mathematics and 24.2% variance in Language.

One can infer from the above analysis that active involvement of teachers in the class, attending school regularly by the students, availability of ancillary facilities and

competency-based textbook have helped the children in improving their learning achievement in EVS, Mathematics and Language. Availability and use of teaching aids also enhance the learning achievement of children in the three subjects.

Comparison of Achievement between DPEP vs Non-DPEP Districts

In West Bengal out of 4 districts, Puralia and Jalapaiguri are the two DPEP districts. The comparative performance of students in DPEP vs non-DPEP districts is presented below:

Table 30: Genderwise and DPEP wise achievement of Class V Students

Subject	Gender	DPEP Districts			Non-DPEP Districts			CR Value
		1			2			
		N	M	SD	N	M	SD	
EVS	Boys	1272	53.24	20.12	1159	62.61	18.46	11.97
	Girls	1016	55.21	21.14	1292	63.13	21.01	8.96
	Diff.		-1.97			-0.52		
	Total	2288	54.11	20.6	2451	62.88	19.84	14.91
	CR Value		-2.26			-0.65		
Mathe- matics	Boys	1272	55.84	19.97	1159	65.61	20.71	11.82
	Girls	1016	53.23	21.54	1292	64.8	22.79	12.49
	Diff.		2.61			0.81		
	Total	2288	54.68	20.72	2451	65.18	21.83	16.99
	CR Value		2.97			0.92		
Language	Boys	1272	65.67	15.02	1159	76.54	12.35	19.56
	Girls	1016	63.54	14.65	1292	75.92	14.49	20.25
	Diff.		2.13			0.62		
	Total	2288	64.73	14.89	2451	76.22	13.52	27.75
	CR Value		3.42			1.14		

The data reveals that in all the three subjects, the achievement of students of non-DPEP districts was significantly better than students of DPEP districts.

Hard Spot of Learning

In EVS, only question number 21 was found very difficult and 10(25%) items were found difficult. The hard spots were: identification of boundaries with neighbouring countries, understanding a longitude and a latitude, recognition of first president of India, knowledge of postal services, knowledge of UN days, problems of over population, knowledge of solar system, planets etc., knowledge of composition of air, effects of deforestation and knowledge of parts of human body.

In Language, no item was found very difficult, however question number 14, 16, 17, 23, 36 and 38 were found difficult. The hard spots were: comprehension of instructions and comprehension of story.

In Mathematics, question number 29 and 37 were found very difficult and 9 (24%) items were found difficult. The hard spots were: number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

Analysis of the results signified that :

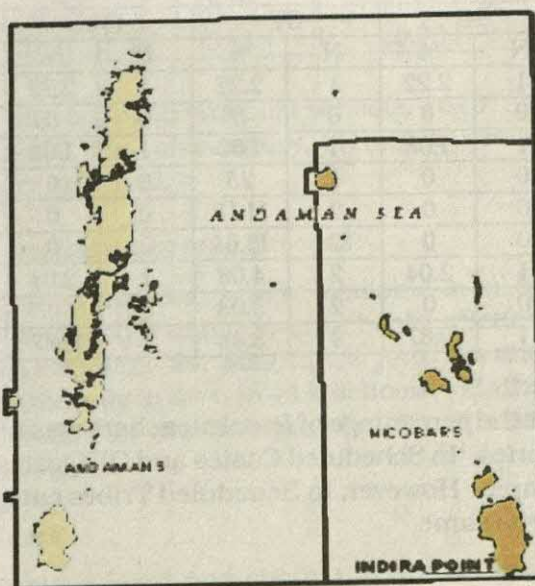
- Musical instruments were available approximately in half schools.
- TV was available in very few schools.
- Pre-primary schools were attached to primary and upper primary school.
- Competency-based textbooks, workbooks and teachers' handbooks were available in very few schools till year 2001.
- More students were getting the benefit under free textbooks scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 218.
- Almost all schools in rural areas were having Village Education Committees.
- SMC and PTA were almost same in terms of percentage in schools located in urban areas than schools in rural areas.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Pupil-teacher ratio was higher in rural schools than urban schools.
- Majority of teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted by Cluster Resource Centre and minimum by 'School Complex' and 'Block Resource Centre'.
- Not a single in-service training programme was organised by DIET.
- Maximum in-service training programmes were conducted on 'Content Enrichment and minimum on 'Activity-based Joyful Learning' during last three years.
- Not a single programme was conducted on 'Assessment of Pupil Learning'.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Majority of teachers have not attended any in-service training programme during last three years.
- Majority of mothers were housewives and fathers were farmers in rural areas.
- Majority of fathers were manager/senior officer skilled worker and mothers were housewives in urban areas.
- In most of cases, teachers were getting assistance always from 'Head of Schools'.
- For approximately 91% students medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from father/guardian than other family members, in rural areas.
- In urban areas, students were getting more academic assistance from mothers than other family members.
- In general educational qualification of mothers was poorer than fathers.
- Approximately, 88% students were attending schools above 70% working days.
- Approximately, less than 4% students were attending schools below 60% of the total working days.
- Performance of urban students was better than their counterparts in rural areas.
- Within SC and Others category urban students achieved significantly better than rural students.
- Students of Others category performed significantly better than SC and ST category students in all the three subjects.
- 6 to 10% of students scored between 90-100% in all the three subjects.
- In urban areas, performance of students of Others category was better than SC students.
- Active involvement of teachers in class, attending school regularly by students, availability of physical and ancillary facilities and competency-based textbook in school, more number of female teachers in school help the children in improving their learning achievement in the three subjects.

ANDAMAN AND NICOBAR ISLANDS

Introduction

Andaman and Nicobar are group of 572 Islands spread over the territory of 8,249 sq. km. The territory of Andaman and Nicobar Islands consist of two districts namely the Andaman district and Nicobar district. The total population of the Island as per the provisional Census of Population 2001 is 3,56,265 out of which 1,92,985 (54.20%) are male and 1,63,280 (47.80%) are female. It indicates 846 females per 1000 male population. Out of total population, 32.67% is urban. As per 2001 provisional population data the total literacy rate of these islands is 81.18% comprising of 86.07% males and 75.29% females.

ANDAMAN & NICOBAR ISLANDS 2001



Due to the presence of lots of schemes sponsored by both Central and State government the dropout rate for the year 2001-2002 at primary level was nil. But at upper primary level it is 17.9% for boys and 12.7% for girls. This dropout rate creates a blockage to achieve the goal of UEE. Despite all sorts of barriers like geographical and multilingual, these Islands are all committed to achieve the goal.

Sample

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 43 schools were sampled from A and N Islands. Out of total sampled schools, 34 schools were from rural areas and remaining 9 schools were from urban areas.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	34	34	100	0	0	0	0
Urban	9	9	100	0	0	0	0
Total	43	43	100	0	0	0	0

Teachers

A total 115 teachers were sampled from 43 sampled schools. Out of 115 teachers, 49 were male teachers and 66 were female teachers. Areawise, 93 teachers were from rural areas and 22 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	1	2.22	1	2.22	1	2.22	42	93.33	45
	Female	0	0	0	0	0	0	48	100	48
	Total	1	1.08	1	1.08	1	1.08	90	96.77	93
Urban	Male	0	0	1	25	0	0	3	75	4
	Female	0	0	2	11.11	0	0	16	88.89	18
	Total	0	0	3	13.64	0	0	19	86.36	22
Total	Male	1	2.04	2	4.08	1	2.04	45	91.84	49
	Female	0	0	2	3.03	0	0	64	96.97	66
	Total	1	0.87	4	3.48	1	0.87	109	94.78	115

Table 2 shows that the percentage of female teachers was higher than male teachers in case of Other categories. In Scheduled Castes and OBC categories not a single female was figured in the sample. However, in Scheduled Tribes category the number of male and female teachers was same.

Students

A total number of 811 students appeared in each of the three tests i.e., in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
A & N Island	Rural	289	289	578
	Urban	131	102	233
	Total	420	391	811
Total	Rural	289	289	578
	Urban	131	102	233
	Total	420	391	811

Out of 811 students, 578 students were from rural areas and remaining 233 students were from urban areas. Out of the total sample, 420 were boys and 391 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of Terminal Stage of School and Pre-school

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	13	38.24	21	61.76	8	23.53	4	11.76	1	2.94
Urban	3	33.33	3	33.33	1	11.11	2	22.22	3	33.33
Total	16	37.21	24	55.81	9	20.93	6	13.95	4	9.3

Table 4 indicates that out of 43 sampled schools, 16 (37.21%) pre-primary schools, 24(55.81%) primary, 9(20.93%) elementary, 6(13.95%) secondary and 4(9.3%) senior secondary schools were attached.

Facilities related to teaching-learning process:

It was observed that maps and charts were available in all schools. Children's books other than textbooks and globes and reference books, dictionaries, encyclopedia were available in more than 98% schools. Magazines, journals and newspaper and primary science kit were available only in 40% to 44% schools. Maths kit was available in 79% schools. Besides, mini tool kit was available in 19% schools. Play material and toys were available in 88% schools.

Infrastructural facilities

It was observed that blackboard and chalk and duster were available in all schools, whereas, tables and chairs for teachers were available in 98% schools, school bell and water pitcher, ladel and glasses were available in 81% schools. Besides, play ground was available in 51% schools. However, musical instruments were available in 79%

schools. Further, dustbin and pin-up board/notice board were available in 74% and 84% schools.

Ancillary Facilities

Computer was available only in 2% schools. Electric connection was available in all schools. Annual medical check-up for children, and separate toilet facilities for girls were available in 72% and 74% schools, respectively. Toilet facilities and immunisation facilities were available in only 84% to 86% schools. Besides, safe drinking water facility was available in 93% schools. However, TV and first aid kit were available in 84% to 86% schools.

Competency Based Teaching Materials

Information gathered shows that, out of 43 schools, competency-based textbooks, workbooks and teaching aids were available in more schools than teacher's handbook. Teachers' handbook were available in lesser number of schools as compared with others.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	0	0	37	26	0	0	3645	3260	3682	3286
	%	0	0	1.00	0.79	0	0	99.00	99.21	100	100
Free uniform	N	0	0	4	3	0	0	597	552	601	555
	%	0	0	0.67	0.54	0	0	99.33	99.46	100	100
Free textbooks	N	0	0	19	7	0	0	2158	1950	2177	1957
	%	0	0	0.87	0.36	0	0	99.13	99.64	100	100
Scholarship for regular attendance	N	0	0	0	0	0	0	0	0	0	0
	%	0	0	0	0	0	0	0	0	0	0
Other Schemes	N	0	0	0	0	0	0	85	58	85	58
	%	0	0	0	0	0	0	100	100	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other scheme were available to both boys and girls across the categories. In case of mid-day meal, free uniform, free textbooks and other schemes were available to both boys and girls from others categories. However, scholarship for regular attendance was not available to any student in any categories.

Instructional Time

Average number of working days in schools was approximately 218 days. Schools were having 8 periods in a day of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of 43 schools, Area Education Committee was observed in 38 (88.37%) schools and Parent Teacher Association was observed in 42(97.67%) schools. Further, AEC was found more schools located in rural areas than schools in urban areas and for PTA this trend was reverse.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	1	0	1
	%	2.94	0	2.33
AEC	N	31	7	38
	%	91.18	77.78	88.37
SMC	N	0	2	2
	%	0	22.22	4.65
PTA	N	33	9	42
	%	97.06	100	97.67

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	34	117	45.17	142	54.83	259	8	17
Urban	9	27	18.24	121	81.76	148	17	27
Total	43	144	35.38	263	64.62	407	9	19

Table 7 shows that overall number of female teachers was more than male teachers. The number of female teachers in both rural and urban areas schools was more than male teachers. The average number of teachers per school in rural and urban areas was 8 and 17, respectively. Further, average teacher-pupil ratio was 19:1. However, this ratio was 27:1 approximately in urban schools.

Educational Qualification

The percentage of female teachers holding PG degree and graduation degree was less than male teachers. This trend was reverse for teacher holding sr. secondary certificate. Further, percentage of male and female teachers who studied upto secondary level was almost same. However, no teacher was below Class X certificate holder.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	6	12.24	25	51.02	14	28.57	4	8.16	49
Female	0	0	8	12.12	48	72.73	6	9.09	4	6.06	66
Total	0	0	14	12.17	73	63.48	20	17.39	8	6.96	115

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	6	12.24	34	69.39	5	10.2	4	8.16	49
	Female	4	6.06	55	83.33	6	9.09	1	1.52	66
	Total	10	8.7	89	77.39	11	9.57	5	4.35	115
Science	Male	9	18.37	32	65.31	4	8.16	4	8.16	49
	Female	5	7.58	52	78.79	8	12.12	1	1.52	66
	Total	14	12.17	84	73.04	12	10.43	5	4.35	115
Language (Medium)	Male	0	0	9	18.37	25	51.02	15	30.61	49
	Female	1	1.52	10	15.15	47	71.21	8	12.12	66
	Total	1	0.87	19	16.52	72	62.61	23	20	115
Social Science	Male	2	4.08	13	26.53	23	46.94	11	22.45	49
	Female	2	3.03	10	15.15	46	69.7	8	12.12	66
	Total	4	3.48	23	20	69	60	19	16.52	115

The data reveals that in Mathematics, Science, Language and Social Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, the trend was reverse in case of teachers who studied Mathematics, Science, Language and Social Science upto higher secondary level. Besides, the percentage of male teachers who studied Mathematics and Science upto Class X was more than female teachers.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
43	Male	36	11	0
	Female	58	9	0
	Total	94	20	0

Out of total 115 sampled teachers, 114 (99.1%) had professional qualification. However, genderwise 100% females were professionally qualified. Besides, most of the teachers had Diploma or certificate in Primary/Elementary Education i.e., 82.5%. But

not even a single teacher was M.Ed. degree holder. The majority of teacher had diploma/certificate in Primary/Elementary Education besides not a single teacher was M.Ed degree holder. But 20 teachers had B.Ed. degree.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. The teaching aids were available to more than 85% teachers in urban schools except others. However, charts were available to all teachers. In rural schools, teaching aids were available to more than 88% teachers except, Science and Mathematics kit.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11 In-service Training Programmes

Oranisers who provided training		No. of Teachers Trained
School Complex	N	0
	%	0
Block Resource Centre	N	0
	%	0
Teacher Resource Centre	N	0
	%	0
Cluster Resource Centre	N	0
	%	0
DIET	N	11
	%	9.6
SCERT	N	25
	%	21.7
Others	N	17
	%	14.8

Data portrays that though there was existence of School Complex, Block Resource Centre, Teacher Resource Centre and Cluster Resource Centre, they were not able to train a single teacher fall in the sample during 1999-2000. Only approximately 35% of the sampled teachers agreed that they were trained by DIET (9.6%), SIE (21.7%) and others 14.8%.

Table 12 Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	0
Content Enrichment	25
Production of Instructional Material	0
Use of Instructional Material	1
Assessment of Pupil Learning	0
Competency based Teaching Learning	6
Activity based Joyful Learning	5
Others	26

During in-service training programmes a number of themes were covered. Maximum in-service training programmes were conducted on 'Content Enrichment' followed by 'Competency-based Teaching-Learning'. Minimum programmes were conducted on 'Use of Instructional Material' i.e., only one programme.

The effectiveness of various training programmes is given in Table 13:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	12	3	12	1
	%	23.53	5.88	23.53	1.96
Average	N	38	47	39	50
	%	74.51	92.16	76.47	98.04
Low	N	1	1	0	0
	%	1.96	1.96	0	0

It is evident that approximately 75% training programmes were average effective in terms of utility of knowledge gained during training programmes. Only 23% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as average by 77% to 98% teachers in different subjects. However, improvement in teaching skills in all subjects due to these training programmes was rated 'High' by 2% to 23% teachers.

Out of total 115 teachers, 64(55.65%) were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 51% and 59%. In urban areas, the percentage of male and female teachers was same. However, percentage of female teachers who had not attended any training programme in rural schools was more than their male counterparts.

Academic Assistance received from various Sources

Data collected indicates that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'. However, guidance by DIET was noted as very poor.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 78% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Students' Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	29	3.58	9	1.10
Illiterate	116	14.30	237	29.22
Literate	38	4.68	52	6.41
Primary	206	25.40	197	24.29
Secondary	255	31.44	239	29.47
Sr. Secondary	83	10.23	41	5.05
Degree and above	32	3.95	9	1.10
Donot Know/Cannot say	52	6.41	27	3.33

Table 14 indicates that approximately 14% fathers and 29% mothers of the students were illiterate. Only 4% fathers and 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational of mother was poorer than father.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	39	15	54	17	5	22
Household/ Housewife	0	0	0	420	181	601
Farmer	113	3	116	34	1	35
Poultry farming	2	0	2	1	0	1
Agricultural labour	25	2	27	32	0	32
Picking forest produce	4	0	4	0	0	0
Domestic Servent	1	2	3	12	6	18
Street Vender	4	3	7	0	0	0
Manual unskilled worker	134	54	188	35	17	52
Skilled worker	112	81	193	6	9	15
Clerical worker	10	13	23	1	8	9
Shopkeeper	32	4	36	5	1	6
Employer	8	8	16	1	0	1
Manager/Senior Officer	23	14	37	5	1	6
Others	71	34	105	9	4	13

In rural areas majority of mothers were housewives and fathers were manual unskilled worker. In urban areas also, majority of mothers were housewives and fathers were skilled workers. Only few mothers and fathers were Manager/Senior Officers. Number of Manager/Senior Officers father and mother was more in rural areas than urban areas. In decreasing order, fathers were working as skilled worker, unskilled

worker, farmer, others, manager/senior officer, shopkeeper, agricultural labour and clerical worker etc. In decreasing order, mothers were working as household/housewives, manual unskilled worker, farmer, agricultural labour, domestic servant, skilled worker, others and clerical worker etc.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	96	91	39	45	135	136
	%	33.22	31.49	29.77	44.12	32.14	34.78
Mother	N	78	81	38	39	116	120
	%	26.99	28.03	29.01	38.24	27.62	30.69
Elder Brother/Sister	N	136	113	43	28	179	141
	%	47.06	39.1	32.82	27.45	42.62	36.06
Others	N	34	21	21	16	55	37
	%	11.76	7.27	16.03	15.69	13.1	9.46

Girls and boys both in rural, and urban as well as girls overall were getting more help from elder brother/sister than any other. However, in urban areas, girls were getting more academic assistance from father than boys but the trend was reverse in rural areas. The descending order of academic assistance provided by the family members was elder brother and sisters, father and mothers for overall.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was more than boys. It was also true for both rural and urban areas. However, the percentage of boys and girls attending school between 80-90% of working days was 30% and 34%, respectively. Only 4% percent boys and 4% girls were attending schools less than 60% of total working days. Approximately, 87% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in A and N Islands. The language test had two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

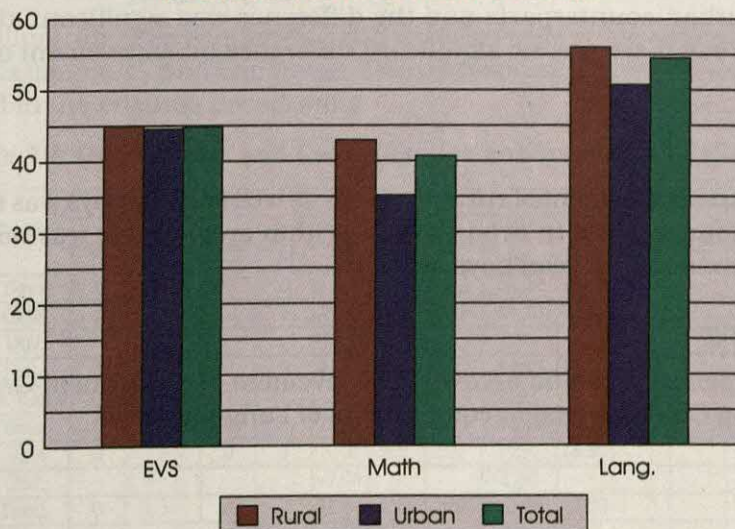
Genderwise and Areawise Achievement

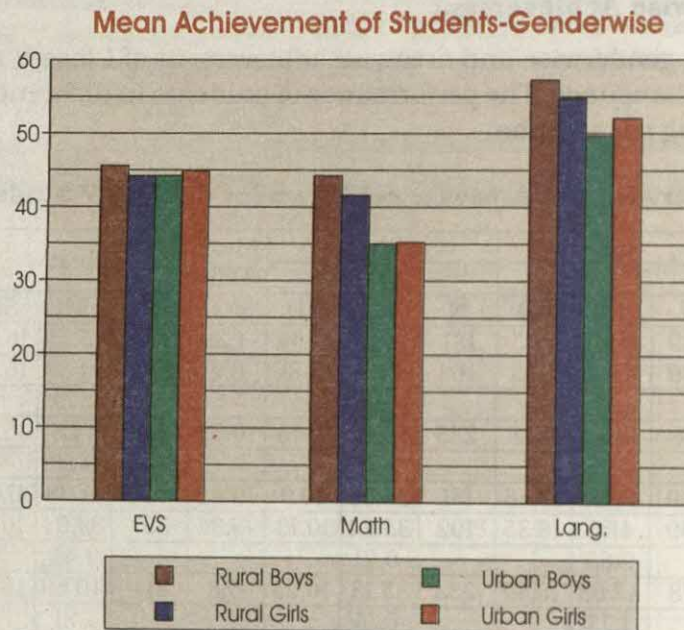
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	289	45.61	17.05	131	44.22	14.42	-1.39	420	45.18	16.27	-0.86
	Girls	289	44.2	17.88	102	44.9	12.86	0.7	391	44.39	16.71	0.42
	Diff.		1.41			-0.68				0.79		
	Total	578	44.91	17.47	233	44.52	13.73	-0.39	811	44.8	16.48	-0.34
	CR Value		0.97			-0.38				0.68		
Mathe matics	Boys	289	44.25	18.56	131	35.03	10.9	-9.22	420	41.38	17.08	-6.36
	Girls	289	41.6	18.35	102	35.24	10.13	-6.36	391	39.94	16.83	-4.32
	Diff.		2.65			-0.21				1.44		
	Total	578	42.93	18.49	233	35.13	10.55	-7.8	811	40.69	16.96	-7.54
	CR Value		1.73			-0.15				1.21		
Langu- age	Boys	289	57.26	15.6	131	49.66	15.53	-7.6	420	54.89	15.95	-4.64
	Girls	289	54.77	16.72	102	52.08	13.41	-2.69	391	54.07	15.95	-1.63
	Diff.		2.49			-2.42				0.82		
	Total	578	56.01	16.2	233	50.72	14.66	-5.29	811	54.49	15.95	-4.51
	CR Value		1.85			-1.27				0.73		

Mean Achievement of Students-Areawise





Environmental Studies

The data reveals that there was no significant difference in achievement of students in both boys and girls, across and within areas.

Mathematics

The data reveals that achievement of students of both boys and girls of rural areas was better than their urban counterparts and the difference was significant at 0.01 level. However, within areas there was no significant difference in achievement of both boys and girls.

Language

The data reveals that achievement of rural students as well as rural boys was significantly better than their counterparts in urban areas. Within areas, there was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	289	59.79	15.5	131	51.6	16.28	-8.19	420	57.24	16.18	-4.85
	Girls	289	56.37	16.45	102	56.51	13.2	0.14	391	56.41	15.65	0.09
	Diff.		3.42			-4.91				0.83		
	Total	578	58.08	16.06	233	53.75	15.18	-4.33	811	56.84	15.92	-3.61
	CR Value		2.57			-2.54				0.74		
Compre- hension	Boys	289	53.03	20.56	131	46.41	18.7	-6.62	420	50.97	20.21	-3.26
	Girls	289	52.09	21.68	102	44.71	17.54	-7.38	391	50.16	20.91	-3.43
	Diff.		0.94			1.7				0.81		
	Total	578	52.56	21.11	233	45.67	18.18	-6.89	811	50.58	20.54	-4.66
	CR Value		0.53			0.71				0.56		

The data reveals that achievement of rural students as well as rural boys was significantly better than their urban counterparts. In rural areas, boys performed significantly better than girls whereas in urban areas girls performed significantly better than boys.

Reading Comprehension

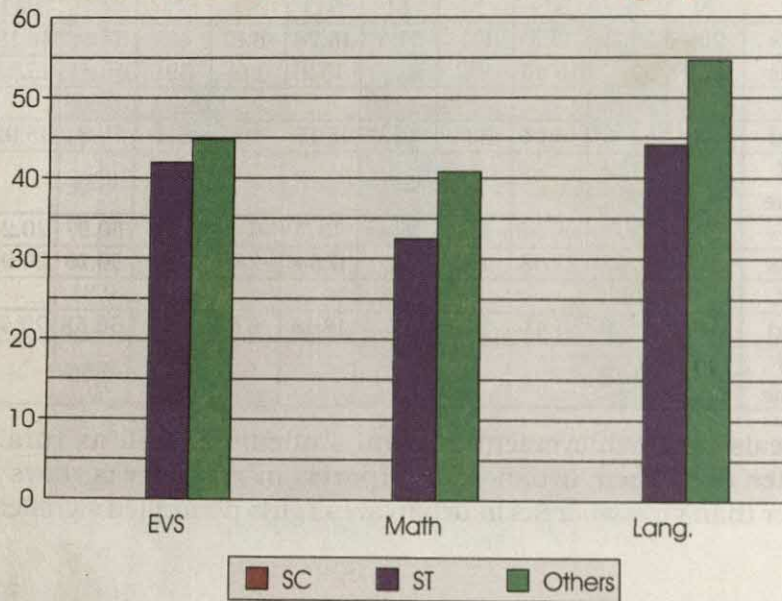
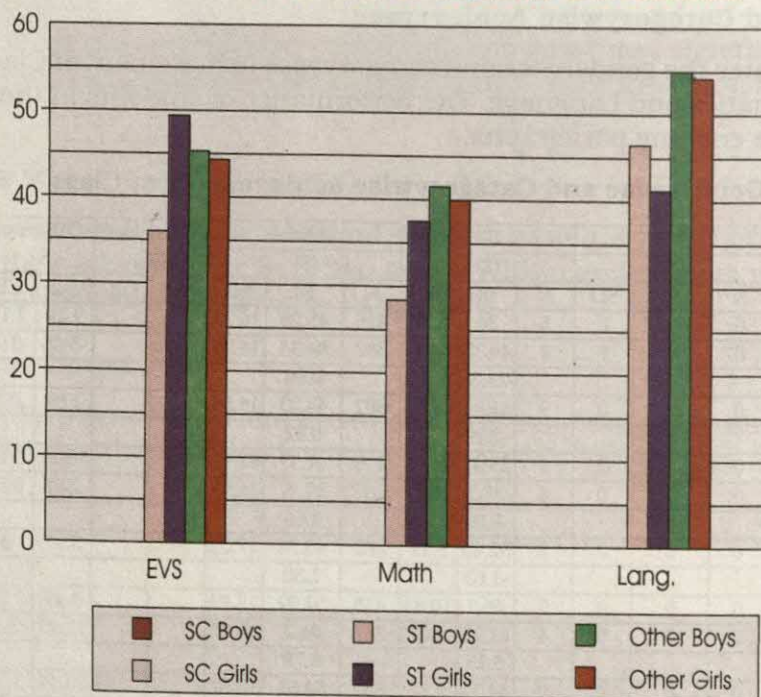
The data reveals that achievement of rural students, both boys and girls of rural areas performed significantly better than urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	0	0	0	5	36	6.27	415	45.29	16.33			9.29	3.19		
	Girls	0	0	0	4	49.38	10.87	387	44.33	16.76			-5.05	-0.92		
	Diff.					-13.38			0.96							
	Total	0	0	0	9	41.94	10.66	802	44.83	16.53			2.89	0.8		
	CR Value					-2.19			0.82							
Mathematics	Boys	0	0	0	5	28.42	5.39	415	41.53	17.12			13.11	5.14		
	Girls	0	0	0	4	37.5	8.7	387	39.97	16.89			2.47	0.56		
	Diff.					-9.08			1.56							
	Total	0	0	0	9	32.46	8.11	802	40.78	17.02			8.32	3		
	CR Value					-1.83			1.30							
Language	Boys	0	0	0	5	46.5	10.84	415	54.99	15.99			8.49	1.73		
	Girls	0	0	0	4	41.25	7.22	387	54.2	15.97			12.95	3.5		
	Diff.					5.25			0.79							
	Total	0	0	0	9	44.17	9.27	802	54.61	15.97			10.44	3.32		
	CR Value					0.87			0.71							

Mean Achievement of Students-Categorywise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data reveals that achievement of Others boys was significantly better than ST boys. In ST category, girls performed significantly better than boys.

Mathematics

The data reveals that achievement of students as well as boys of Others category was significantly better than their counterparts in ST category. Within categories, there was no significant difference in achievement between boys and girls.

Language

The data reveals that achievement of students as well as boys of Others category was significantly better than their counterparts in ST category. Within categories, there was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			SC		ST		SC	
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Boys	0	0	0	5	44.8	17.06	415	57.39	16.13			12.59	1.64		
	Girls	0	0	0	4	49	8.25	387	56.49	15.69			7.49	1.78		
	Diff.					-4.2			0.9							
	Total	0	0	0	9	46.67	13.27	802	56.95	15.92			10.28	2.31		
	CR Value					-0.48			0.80							
Reading Comprehension	Boys	0	0	0	5	49.33	7.6	415	50.99	20.32			1.66	0.47		
	Girls	0	0	0	4	28.33	6.38	387	50.39	20.89			22.06	6.56		
	Diff.					21			0.6							
	Total	0	0	0	9	40	12.91	802	50.7	20.59			10.7	2.45		
	CR Value					4.50			0.01							

The data reveals that students of Others category performed significantly better than ST students. There was no significant difference in achievement of boys and girls across and within categories.

Reading Comprehension

The data reveals that achievement of students as well as boys of Others category was significantly better than their counterparts in ST category. In ST category, boys performed significantly better than girls.

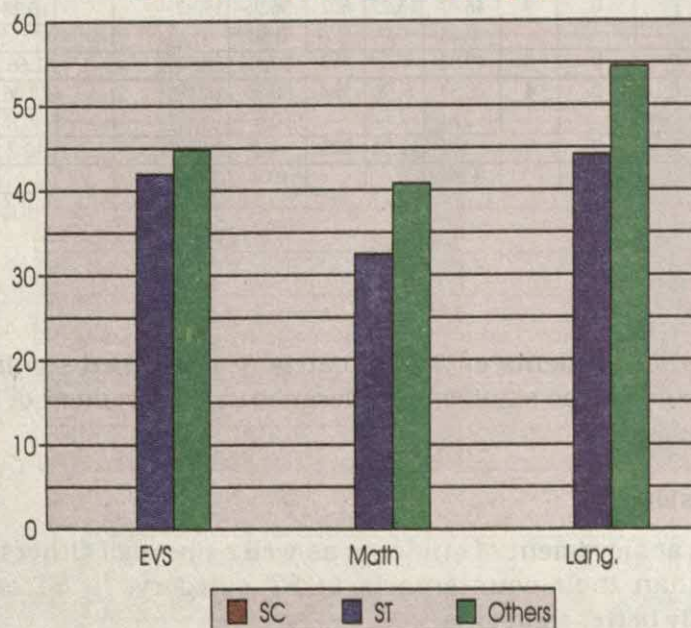
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

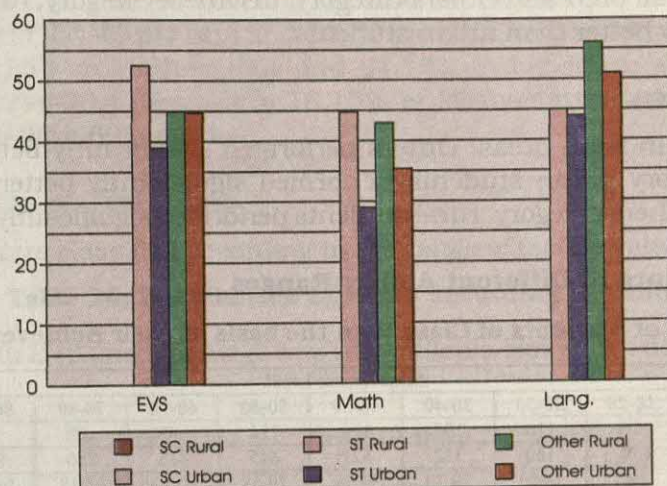
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	0	0	0	2	52.5	17.68	576	44.88	17.48			-7.62	-0.61		
	Urban	0	0	0	7	38.93	7.2	226	44.69	13.86			5.76	2		
	Diff.					13.57			0.19							
	Total	0	0	0	9	41.94	10.66	802	44.83	16.53			2.89	0.8		
	CR Value					1.06			0.16							
Mathematics	Rural	0	0	0	2	44.74	3.72	576	42.92	18.52			-1.82	-0.66		
	Urban	0	0	0	7	28.95	4.56	226	35.32	10.63			6.37	3.42		
	Diff.					15.79			7.6							
	Total	0	0	0	9	32.46	8.11	802	40.78	17.02			8.32	3		
	CR Value					5.02			7.26							
Language	Rural	0	0	0	2	45	7.07	576	56.05	16.22			11.05	2.19		
	Urban	0	0	0	7	43.93	10.29	226	50.93	14.74			7	1.75		
	Diff.					1.07			5.12							
	Total	0	0	0	9	44.17	9.27	802	54.61	15.97			10.44	3.32		
	CR Value					1.17			4.30							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in urban areas, Others performed significantly better than ST students. Within ST and Others there was no significant difference in achievement of rural and urban students.

Mathematics

The data reveals that in urban areas, Others performed significantly better than ST students. Within ST and Others categories rural students performed significantly better than urban students.

Language

The data reveals that in rural areas, Others performed significantly better than ST students. In Others category rural students performed significantly better than urban students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)	CR	(3-2)	CR	(2-1)	CR
		N	M	SD	N	M	SD	N	M	SD						
Grammar & Usage	Rural	0	0	0	2	54	8.49	576	58.1	16.08	-	-	4.1	0.68	-	-
	Urban	0	0	0	7	44.57	14.13	226	54.04	15.15	-	-	9.47	1.74	-	-
	Diff.					9.43			4.06		-	-			-	-
	Total	0	0	0	9	46.67	13.27	802	56.95	15.92	-	-	10.28	2.31	-	-
	CR Value					1.17			3.35		-	-			-	-
Reading Comprehension	Rural	0	0	0	2	30	4.71	576	52.64	21.11	-	-	22.64	6.57	-	-
	Urban	0	0	0	7	42.86	13.25	226	45.75	18.33	-	-	2.89	0.56	-	-
	Diff.					-12.86			6.89		-	-			-	-
	Total	0	0	0	9	40	12.91	802	50.7	20.59	-	-	10.7	2.45	-	-
	CR Value					-2.14			4.58		-	-			-	-

The data reveals that in both rural and urban areas, there was no significant difference in achievement of ST and Others category. In Others category, rural students performed significantly better than urban students.

Reading Comprehension

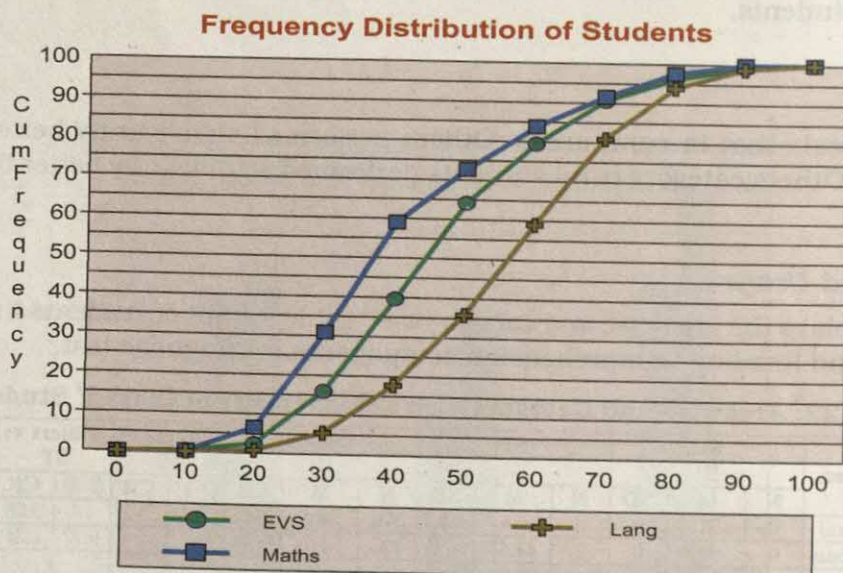
The data reveals that in rural areas, Others performed significantly better than ST students. In ST category urban students performed significantly better than rural students whereas in Others category, rural students performed significantly better than urban students.

Distribution of Students in Different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	4	16	110	192	199	124	90	45	26	5
	cf	4	20	130	322	521	645	735	780	806	811
	cf(%)	0.49	2.47	16.03	39.70	64.24	79.53	90.63	96.18	99.38	100
Math	f	3	50	198	228	111	90	63	49	19	0
	cf	3	53	251	479	590	680	743	792	811	811
	cf(%)	0.37	6.54	30.95	59.06	72.75	83.85	91.62	97.66	100	100
Language	f	1	5	38	100	147	187	178	106	40	9
	cf	1	6	44	144	291	478	656	762	802	811
	cf(%)	0.12	0.74	5.43	17.76	35.88	58.94	80.89	93.96	98.89	100

The data given in Table 23 reveals that in EVS and Language the distribution of scores covered the entire range from 0-100 per cent. In Mathematics none of the



students achieved more than 90 per cent marks. The maximum number of cases in EVS (199), in Mathematics (228) and in Language (187) were in the range 40-50 per cent, 30-40 per cent and 50-60 per cent, respectively. The 35.76% students in EVS, 27.25% in Mathematics and 64.12% in Language scored more than 50% marks whereas 20.47% in EVS, 16.15% in Mathematics and 41.06% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

No item in EVS and Language was very difficult. However, 20% items in Mathematics

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	0	0	8
25 to less than 50	Difficult	27	17	19
50 to less than 75	Average	12	18	11
75 to 100	Very Easy	1	5	0

were very difficult. 67% items in EVS, 42% items in Language and 50% items in Mathematics are difficult. Nearly 30% items in EVS and Mathematics and 45% items in Language were of average value. 2.5% item in EVS and 12% items in Language were very easy.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	33	31	30
Less than .30	Poor Discrimination	7	9	8

No item in EVS, Language and Mathematics have shown good D.I. Nearly 80% items in each subject have shown average discrimination. And remaining 20% items in each subject were poorly discriminated.

The reliability of tests is given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.75	0.81
2	Mathematics	38	0.67	0.82
3	Language	40	0.73	0.80

The reliability co-efficient for EVS, Language and Mathematics is fairly good.

Impact of Intervening Variables

School Related Variables

Teaching aids and number of working days in the school influence the learning achievement of children in the three subjects. The positive association of teaching aids with the criterions indicates that availability of teaching aids also help the children in improving their learning achievement all subjects.

Table 27: Regression and correlation Co-efficient of the Predictors of School related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	95.105	-----	80.325	-----	71.994	-----
PTR	-0.147	-0.071	-0.094	-0.035	-0.036	-0.026
Com_Participation	10.232	0.242	10.400	0.149	7.562	0.275
Teach-aid	3.484	0.395**	1.383*	0.061	1.217	0.134
Physical facility	0.046	0.071	0.073	0.123	0.082	0.032
Ancillary facility	2.947	0.371	0.683	0.025	1.501	0.236
Instructional time	0.034	0.040	0.037	0.039	0.016	0.053
Working day	0.048*	0.043**	0.237**	0.550	0.093*	0.028
Index-Comp. TLM	0.049	0.027	0.400*	0.012	-0.019	-0.055
R²	0.498		0.403		0.40	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 49.8% of total variance in EVS, 40.3% in Mathematics and 40.0% in Language independently.

Teacher Related Variables

Help from senior officers of school organisation and teaching-aids and teaching style of teachers influence learning achievement of children in the three subjects. The positive association of these school variables with the three criterions indicates that help from senior officers of school organisation and use of teaching aids and teaching style of teacher help the children in improving their learning skills in the three subjects. This implies that teachers play important role in improving learning achievement of children in the three subjects.

Table 28: Regression and correlation Co-efficient of the Predictors of Teacher related variables with the Criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	55.702	-----	55.368	-----	62.784	-----
Index-Qualification	0.028	0.007	0.039*	0.020	0.096	0.094
Index-Experience	0.316	0.081	0.748	0.100	0.071	0.158
Index-Teaching Aid	0.500*	0.172*	0.305**	0.346**	0.548**	0.041**
Index-School Org.	0.035**	0.027**	0.865**	0.031**	0.183**	0.034**
R²	0.097		0.233		0.026	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 9.7% of total variance in EVS, 23.3% in Mathematics and 2.6% in Language.

Pupil Related Variables

The teaching-learning processes adopted by teachers in school, and educational and occupation status of parents influence the learning achievement of children in three subjects EVS, Mathematics and Language. The positive association with the three criterions indicates that active involvement of teachers in school and family members at home help the children in improving their learning achievement in three subjects.

Table 29: Regression and correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Mathematics		Language	
	B	r	B	r	B	r
Constant	42.614	-----	37.705	-----	48.787	-----
Index-Ed & Occu	1.977*	0.074*	1.118	0.038	2.159**	0.099**
Index-Schooling	0.071	0.003	0.017	0.013	0.003	0.017
Index-TLP	5.689**	0.123**	7.221**	0.152**	7.889**	.179**
Age	-0.595	-0.019	-0.038	-0.027	-0.207	-0.076
Detention	-0.322*	-0.094**	-0.080	-0.059	-0.144**	-0.167**
Attendance	0.040	0.009	0.038	0.038	0.062	0.078
R²	0.031		0.029		0.068	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 3.1% of total variance in EVS, 2.9% in Mathematics and 6.8% in Language.

From the above analysis one can infer that more the working days in a school, higher is the achievement of children in the three subjects and vice-versa. However, the teaching-learning processes adopted by teachers and educational and occupational status of parents helped in improving their learning achievement to some extent in the three subjects.

Hard Spot of Learning

In EVS, no item was found very difficult, however, 27 (68%) items were found difficult. The hard spots were found in almost all units.

In Language, no item was found very difficult, however, 17(42%) items were found difficult. The hard spots were: vocabulary, comprehension of instructions, time table, informatinal passage and story.

In Mathematics, 8(20%) items were found very difficult, and 19(50%) items were found difficult. The difficult concepts were in were: number system, commercial mathematics, fraction, measurement/area and geometry.

Findings

Analysis of the results signified that

- Musical instruments were available to more than 3/4th schools.

- Computer was available in two schools.
- More teaching aids, textbooks, workbooks and teachers' handbooks were available to primary classes in 2001.
- More students were getting the benefit under mid-day meal scheme as compared to rest of the schemes implemented in the state.
- Average number of working days in schools was approximately 218.
- Almost all schools in rural areas were having Village Education Committees.
- AEC and PTA were more in terms of percentage in schools located in rural areas than schools in urban areas.
- Percentage of female teachers was higher than male teachers in urban schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was low in urban schools than rural schools.
- Percentage of degree and PG degree holder male teachers was more than female teachers.
- Not a single teacher was below Class X passed.
- More degree holder male teachers studied Mathematics, Science Language and Social Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Teaching aids were available to more than 85% teachers.
- Maximum in-service training programmes were conducted by SIE and minimum by DIET.
- Maximum in-service training programmes were conducted on 'Content Enrichment' and only one programme was conducted on 'Use of Instructional Material,' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'Average' by majority of teachers.
- Approximately, 56% teachers have not attended any in-service training programme during last three years.
- More mothers were housewives and fathers were manual skilled worker in rural areas as compared to other occupants.
- More of fathers were skilled worker and mothers were housewives in urban areas as compared with other occupations.
- In most of cases, teachers were getting assistance from 'Head of Schools' 'Always'.
- Percentage of fathers having educational qualification degree or higher educational qualification was more than mothers.
- In general, educational qualification of mothers was poorer than fathers.
- Approximately, 87% students were attending schools above 70% working days.
- For approximately 3/4th students medium of instructions in the school was same as the language spoken at home.
- Students were getting more academic assistance from elder brother and sister than other family members.
- Rural girls were getting more academic assistance from fathers than boys in rural areas.
- Approximately, less than 5% students were attending schools below 60% of the total working days.
- Rural students performed significantly better than urban students in Mathematics and Language.
- One can infer that more the working days in a school, lower is the achievement of children in the three subjects and vice-versa.
- Teaching aids, teaching learning material available in the school and educational status of parents helped in improving the learning achievement of children.

Introduction

The Union Territory of Chandigarh came into existence on 1st November, 1966. It is the capital of both Punjab and Haryana. Chandigarh is an educationally advanced city having adequate educational facilities available for the city population. Primary schools in Chandigarh have Class I to V. At the end of primary education students have to appear for the examination held by DPI, Chandigarh. The literacy rate in Chandigarh is 81.76%. In case of males, literacy rate is 85.65% and 76.65% in case of females, according to 2001 Census. This percentage is quite higher (81.76%) against the national rate of 65.38%.

The number of government primary schools had increased from 32 during 1966-67 to 46 during 1999-2000, showing an increase of 43.7%. The number of private primary schools remained at 24 over the period till 2001. It shows that even in the recent period the government schools are having a leading role in providing primary education. According to 6th All India Educational Survey, each rural habitation is served by a primary school within the radius of 1 km. The number of teachers in primary schools also indicated an increase from 260 in 1996 to 366 in 2001. It is worth mentioning that teachers working in government primary schools are trained teachers. Similarly, the enrolment in primary schools of Chandigarh also showed an increase from 4,234 during 1966-67 to 15,400 during 2000-01. To improve the attendance of students in schools, mid-day meals scheme is adopted in Chandigarh. The benefit of this scheme has been extended to the students studying upto Class VIII in Chandigarh. Chandigarh Administration has planned to achieve the target of Universalisation of Primary Education by 2007.

Sample

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

School

A total of 50 schools were sampled from Chandigarh. Out of total sampled schools, 30 schools were from urban areas and 20 schools were from rural areas. Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	20	20	100	0	0	0	0
Urban	30	30	100	0	0	0	0
Total	50	50	100	0	0	0	0

Teachers

A total 93 teachers were sampled from 50 sampled schools. Out of 93 teachers, 5 teachers were males and 88 teachers were females. Areawise 35 teachers were from rural areas and 58 were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	1	33.33	0	0	0	0	2	66.67	3
	Female	3	9.38	0	0	0	0	29	90.63	32
	Total	4	11.43	0	0	0	0	31	88.57	35
Urban	Male	1	50	0	0	0	0	1	50	2
	Female	7	12.5	0	0	2	3.57	47	83.93	56
	Total	8	13.79	0	0	2	3.45	48	82.76	58
Total	Male	2	40	0	0	0	0	3	60	5
	Female	10	11.36	0	0	2	2.27	76	86.36	88
	Total	12	12.9	0	0	2	2.15	79	84.95	93

Table 2 shows that the percentage of female teachers was higher than male teachers in case of other categories. However, this trend was reverse in scheduled caste category. In rural area 11.43%, and 88.57% teachers were of SC and others categories, respectively. In urban areas 13.79%, 3.45% and 82.76% teachers were from SC, OBC and Other categories, respectively. The number of female teachers was more than male teachers.

Students

A total number of 1405 students appeared in each of three tests i.e., EVS, Language and Mathematics. Table 3 gives the account of the sampled students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Chandigarh	Rural	275	274	549
	Urban	382	474	856
	Total	657	748	1405
Total	Rural	275	274	549
	Urban	382	474	856
	Total	657	748	1405

Out of 1405 students, 549 students were from rural areas and the remaining 856 were from urban areas. Out of the total sample, 657 were boys and 748 were girls.

Profiles

This section deals with the profile of sampled schools, teacher and students

School Profile

The profile of sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	19	95	9	45	4	20	5	25	2	10
Urban	26	86.67	3	10	5	16.67	12	40	10	33.33
Total	45	90	12	24	9	18	17	34	12	24

Table 4 indicates that out of 50 sampled schools, 45(90.00%) were attached pre-primary, 12(24.00%) primary, 9(18.00%) elementary, 17(34.00%) secondary and 12(24.00%) senior secondary schools.

Facilities related to teaching-learning process

It was observed that in approximately 90% to 98% schools play material and toys, game equipment, reference books, dictionaries, encyclopedia, children's books, maps, charts, globes and primary science kit were available to facilitate teaching-learning process. Besides, mini tool kit, maths kit and magazine, journals, newspapers were available 70% to 78% of the total sampled schools.

Infrastructural facilities

It was observed that black board, chairs and table for teachers, chalk and duster were available in all sampled schools. Besides, school bell, dust bin and water pitcher, ladel and glasses were available in 96% to 98% schools. Further, play ground, pin up board/notice board and musical instruments were available in 86% to 88% schools.

Ancillary Facilities

Computer and TV were available in 42%-52% schools. Facilities like annual medical check-up, safe drinking water, toilet facilities and electric connection were available in only 90% to 96% schools. First aid kit and separate toilet for girls were available in 86% to 88% schools. However, immunisation facilities was available only in 72% schools.

Competency Based Teaching Materials

Information gathered shows that out of 50 schools, competency-based textbooks, workbooks and teaching aids were available in more schools than teachers' handbook. Teachers' handbook were available in lesser number of schools as compared with others.

Incentive Schemes

The Table 5 depicts the category and genderwise number of students receiving facilities under various incentive schemes in 150 schools.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	1853	1716	0	0	273	259	2706	2653	4832	4628
	%	38.35	37.08	0	0	5.65	5.60	56.00	57.32	100	100
Free uniform	N	2468	2294	2	0	0	4	37	3	2507	2301
	%	98.48	99.70	0.08	0	0	0.17	1.48	0.13	100	100
Free textbooks	N	2373	2314	2	0	0	4	0	0	2375	2318
	%	99.92	99.83	0.08	0	0	0.17	0	0	100	100
Scholarship for regular attendance	N	921	1049	0	0	0	125	118	618	1039	1792
	%	88.64	58.64	0	0	0	6.98	11.36	34.49	100	100
Other Schemes	N	471	513	0	0	0	4	75	50	546	567
	%	86.26	90.48	0	0	0	0.71	13.74	8.82	100	100

Various schemes like mid-day meal, free uniform, free textbooks, scholarship for regular attendance and other schemes were available to both boys and girls across the categories. In case of mid-day meal and scholarship for regular attendance both boys and girls from SC and Others categories were more benefited. However, free uniform, free textbooks and other schemes were available to both boys and girls from only SC categories.

Instructional time

Average number of working days in schools was approximately 233 days. Schools were having 7 periods in a day of 40 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of 50 schools, only Parent Teacher Association was observed in all schools. But no other committee was observed in Chandigarh. Further, PTA was found in all most all the schools, both urban and rural schools.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	0	0	0
	%	0	0	0
AEC	N	0	0	0
	%	0	0	0
SMC	N	0	0	0
	%	0	0	0
PTA	N	20	30	50
	%	100	100	100

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Teachers on Roll

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	20	29	12.18	209	87.82	238	12	43
Urban	30	38	9.29	371	90.71	409	14	43
Total	50	67	10.36	580	89.64	647	13	43

Table 8 shows that overall number of female teachers was more than male teachers. The average number of teachers per school in rural and urban area was approximately 12 and 14, respectively. Pupil-Teacher ratio which was 43:1, was almost same in both rural and urban schools.

Educational Qualification

The percentages of female teachers holding graduate degree and PG degree was higher than male teachers. More than 50% teachers were graduates or post graduate. Only 10% teachers had qualified Class X. However, not a single teacher was below Class X passed.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	2	40	2	40	1	20	0	0	5
Female	0	0	8	9.09	22	25	24	27.27	34	38.64	88
Total	0	0	10	10.75	24	25.81	25	26.88	34	36.56	93

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level upto which they had studied Mathematics, Science, Language and Social Science

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	0	0	4	80	1	20	0	0	5
	Female	5	5.68	49	55.68	30	34.09	4	4.55	88
	Total	5	5.38	53	56.99	31	33.33	4	4.3	93
Science	Male	0	0	3	60	2	40	0	0	5
	Female	6	6.82	46	52.27	27	30.68	9	10.23	88
	Total	6	6.45	49	52.69	29	31.18	9	9.68	93
Language (Medium)	Male	0	0	2	40	2	40	1	20	5
	Female	3	3.41	23	26.14	24	27.27	38	43.18	88
	Total	3	3.23	25	26.88	26	27.96	39	41.94	93
Social Science	Male	0	0	2	40	1	20	2	40	5
	Female	5	5.68	32	36.36	24	27.27	27	30.68	88
	Total	5	5.38	34	36.56	25	26.88	29	31.18	93

The data reveals that in Mathematics, Science and Language the percentage of female teachers who had studied these subjects upto degree level was more than male teachers. This trend was reverse in case of Social Science. However, the percentage of male teacher who had studied these subjects upto secondary level was more than female teachers. The percentage of female teachers having higher secondary qualification in Mathematics and Social Science was higher than male teachers. But this trend was reverse in case of Science and Language. Further, not a single male teacher was below Class X.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in Table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
50	Male	5	1	0
	Female	61	34	5
	Total	66	35	5

The majority of teachers were diploma/certificate in primary/elementary education holders and very few teachers had M.Ed.degree. However, approximately 1/3rd teachers had B.Ed.

Availability of Teaching Aids

Various type of teaching aids were available to teachers in both rural and urban areas. The teaching-aids were more available to teachers teaching in rural schools than teachers teaching in urban schools except flash cards.

In-service Training

The account of in-service training programmes attended by teachers organised by various agencies for teachers during the last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of Teachers Trained
School Complex	N	0
	%	0
Block Resource Centre	N	0
	%	0
Teacher Resource Centre	N	0
	%	0
Cluster Resource Centre	N	0
	%	0
DIET	N	0
	%	0
SIE	N	44
	%	47.31
Others	N	0
	%	0

The in-service training programme were organised by the various institutions in the districts during the last three years and teachers from both rural and urban areas attended the same, 47.31% teachers attended the programme conducted by SIE.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	18
Content Enrichment	6
Production of Instructional Material	6
Use of Instructional Material	1
Assessment of Pupil Learning	1
Competency based Teaching Learning	8
Activity based Joyful Learning	5
Others	8

During in-service training programmes number of themes were covered i.e., general training programme, content enrichment, production of instructional material and use of instructional material, assessment of pupil's learning etc. The maximum number of programmes were organised on the theme 'General Training Programme'. However, only one programme was conducted on each theme 'Use of Instructional Material and Assessment of Pupil Learning'.

Out of 93 sampled teachers, 47 teachers, were without any in-service training during last three years. Percentage of female teachers who have not attended any in-service training programme was approximately 49%. The percentage of teachers without in-service training was more in urban areas than rural areas. Further, percentage of female teachers without in-service training was more than male teachers.

The effectiveness of various training programme is given in Table 13.

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	32	22	31	22
	%				
Average	N	14	23	15	24
	%				
Low	N	0	1	0	0
	%				

It is evident that majority of the teachers considered these training programmes as highly effective in terms of utility of knowledge. Similarly, impact of these training programme was rated as 'High' by majority of teacher in different subjects. The improvement in teaching skills in all subjects due to these training programmes was rated high by 48% to 67% teachers.

Academic Assistance received from various Sources

Various committees have been constituted to provide assistance to teachers to improve quality education. The teachers in rural and urban areas were getting 'Always' assistance from Head of school and 'Sometimes' from other teachers of the schools. However, only few teachers of rural schools and teachers of urban schools were getting assistance Always and Sometimes from Cluster Resource coordinators, Block Resource Coordinator and DIET.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 74% students in the schools was same as the language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	13	0.92	13	0.92
Illiterate	161	11.46	484	34.45
Literate	49	3.49	67	4.77
Primary	178	12.67	187	13.31
Secondary	548	39.00	383	27.26
Sr. Secondary	160	11.39	86	06.12
Degree and above	187	13.31	65	4.65
Donot Know/Cannot say	109	07.76	120	8.54

Table 14 indicates that approximately 11% fathers and approximately 34% mothers of the students were illiterate. Only 13% fathers and 5% mothers were having degree or higher educational qualification. Parents educated upto secondary level were maximum as compared to other qualifications. Further, majority of the remaining parents were educated either upto primary level or senior secondary level. Educational level of mothers was poorer than fathers.

Occupation of Parents

Information regarding occupation of father, mother and guardian of the students has been presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	17	22	39	11	9	20
Household/ Housewife	0	3	3	449	694	1143
Farmer	16	9	25	1	1	2
Poultry farming	1	0	1	0	1	1
Agricultural labour	2	3	5	1	0	1
Picking forest produce	0	4	4	0	4	4
Domestic Servent	3	8	11	28	37	65
Street Vender	27	34	61	2	3	5
Manual unskilled worker	64	82	146	18	20	38
Skilled worker	240	200	440	23	34	57
Clerical worker	45	100	145	6	12	18
Shopkeeper	46	91	137	4	10	14
Employer	12	113	125	0	7	7
Manager/Senior Officer	17	80	97	4	9	13
Others	59	107	166	2	15	17

Approximately, 81% mothers were house wives. It was also true for both urban and rural areas. Only few mothers were farmers, poultry farmer, agricultural labour, picking forest produces, street vendor, clerical worker, shopkeeper, employer, manager/senior officers and other occupations. Fathers' occupation in decreasing order was skilled worker, others, manual unskilled worker, clerical worker, shop keeper, employer manager/senior officer, street vendor etc. However, majority of guardian were skilled worker

Academic Assistance Received from Family Members and Others

The information collected from the students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members and Others

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	72	92	137	223	209	315
	%	26.18	33.58	35.86	47.05	31.81	42.11
Mother	N	26	38	95	157	121	195
	%	9.45	13.87	24.87	33.12	18.42	26.07
Elder Brother/Sister	N	61	57	125	170	186	227
	%	22.18	20.8	32.72	35.86	28.31	30.35
Others	N	54	57	70	84	124	141
	%	19.64	20.8	18.32	17.72	18.87	18.85

Girls get more help than boys from all family members. The maximum contribution was from father/guardian followed by mother than from elder brother/sister.

Attendance

Attendance plays an important role in learning. The picture regarding attendance in the selected schools indicated that 90% students were attending schools more than 80% of total working days. Besides, attendance of rural students was better than urban students in the range of 90-100% attendance. However, urban students attendance was better than rural students in the group of 80-90% attendance.

Students Achievement

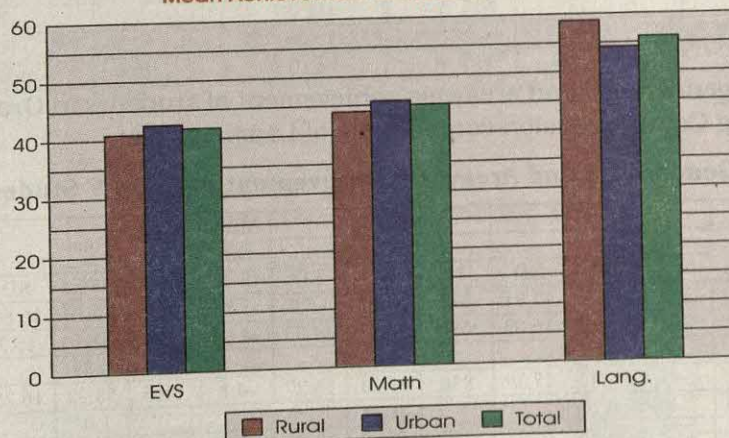
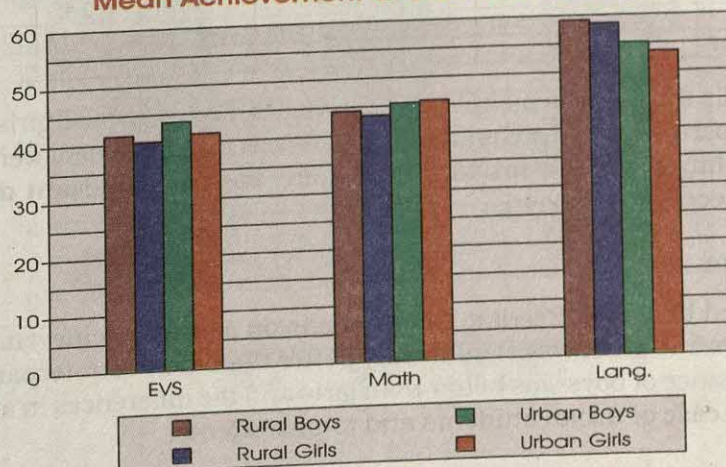
This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Chandigarh. The language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
EVS	Boys	275	41.45	13.1	382	43.65	13.51	2.2	657	42.73	13.37	2.1
	Girls	274	40.25	11.52	474	41.43	13.54	1.18	748	41	12.84	1.26
	Diff.		1.2			2.22				1.73		
	Total	549	40.85	12.34	856	42.42	13.56	1.57	1405	41.81	13.12	2.24
	CR Value		1.14			2.39				2.47		
Mathe- matics	Boys	275	44.45	14	382	45.52	15.2	1.07	657	45.07	14.71	0.93
	Girls	274	43.38	13.62	474	45.78	12.53	2.4	748	44.9	12.98	2.39
	Diff.		1.07			-0.26				0.17		
	Total	549	43.92	13.81	856	45.67	13.78	1.75	1405	44.98	13.81	2.32
	CR Value		0.91			-0.27				0.23		
Language	Boys	275	59.09	17.1	382	55.12	14.92	-3.97	657	56.78	15.98	-3.09
	Girls	274	58.49	15.66	474	53.46	13.82	-5.03	748	55.3	14.71	-4.42
	Diff.		0.6			1.66				1.48		
	Total	549	58.79	16.38	856	54.2	14.34	-4.59	1405	55.99	15.33	-5.38
	CR Value		0.43			1.67				1.8		

Mean Achievement of Students-Areawise**Mean Achievement of Students-Genderwise**

Environmental Studies

The data reveals that achievement of boys was significantly higher than girls. The performance of urban students, both boys and girls, was better than their counterparts in rural areas. The differences in achievement were significant in case of boys and total students. In urban areas, achievement of boys was significantly better than girls.

Mathematics

The data reveals that performance of urban students was better than rural students and the differences in achievement were significant in case of girls and total students. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Language

In Language, the performance of rural students, both boys and girls, was better than their urban counterparts and the differences in achievement were significant in each case. There was no significant difference in achievement between boys and girls.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2							
		N	M	SD	N	M	SD		N	M	SD	
Grammar & Usage	Boys	275	61.56	17.91	382	57.83	15.9	-3.73	657	59.39	16.86	-2.76
	Girls	274	61.27	16.89	474	56.89	14.74	-4.38	748	58.5	15.7	-3.58
	Diff.		0.29			0.94				0.89		
	Total	549	61.41	17.39	856	57.31	15.27	-4.1	1405	58.92	16.25	-4.52
	CR Value		0.2			0.89				1.02		
Compre- hension	Boys	275	54.98	20.41	382	50.59	18.97	-4.39	657	52.43	19.69	-2.8
	Girls	274	53.87	18.81	474	47.74	17.88	-6.13	748	49.98	18.45	-4.37
	Diff.		1.11			2.85				2.45		
	Total	549	54.43	19.61	856	49.01	18.42	-5.42	1405	51.13	19.07	-5.18
	CR Value		0.66			2.24				2.4		

The data reveals that achievement of rural students, both boys and girls, was better than their counterparts in urban areas and the differences in achievement were significant in each case. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Reading Comprehension

As in Grammar and Usage, in Reading Comprehension also, the achievement of rural students, both boys and girls, was significantly better than their counterparts in urban areas. The performance of boys was better than girls and the differences in achievement were significant in case of urban students and total students.

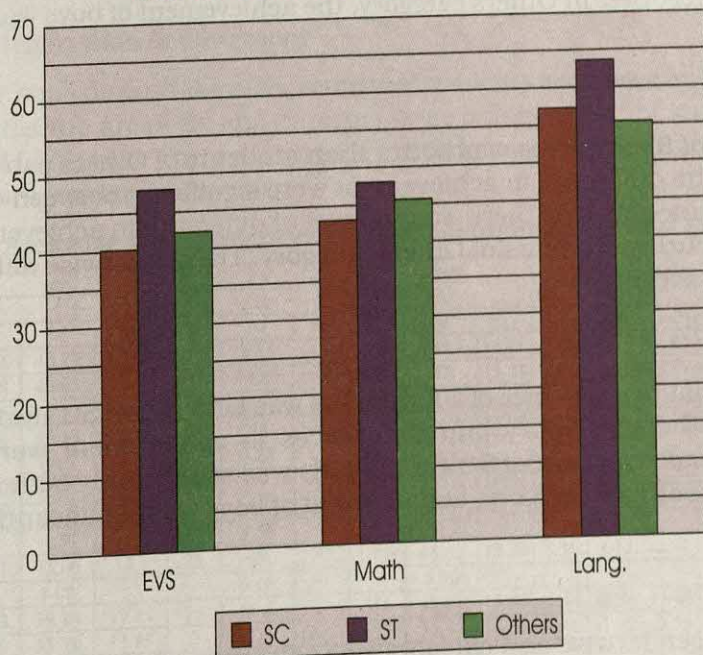
Genderwise and Categorywise Achievement

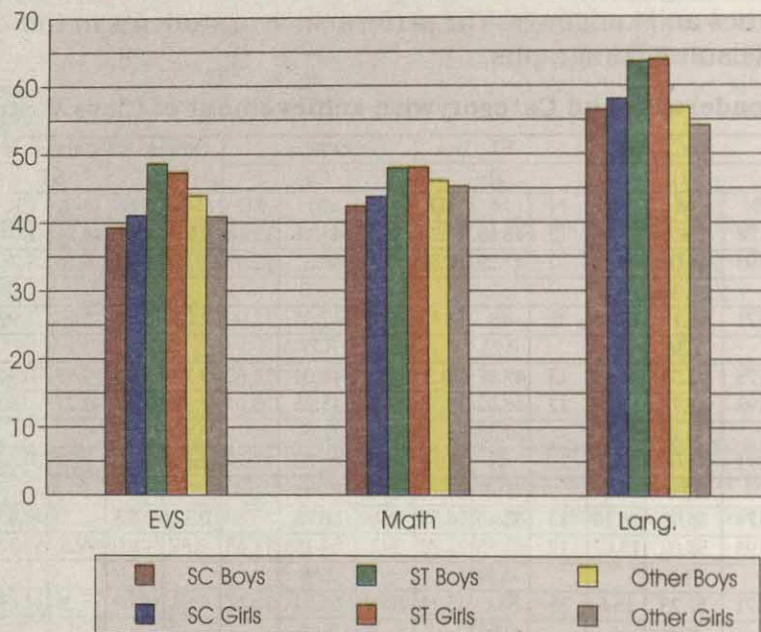
Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Boys	178	39.2	13.03	13	48.65	16.29	466	43.91	13.18	4.71	4.09	-4.74	-1.04	9.45	2.04
	Girls	193	41.06	13.3	12	47.29	12.54	543	40.83	12.67	-0.23	-0.21	-6.46	-1.76	6.23	1.66
	Diff.		-1.86			1.36			3.08							
	Total	371	40.17	13.18	25	48	14.33	1009	42.25	12.99	2.08	2.61	-5.75	-1.99	7.83	2.66
	CR Value		1.36			0.23			3.77							
Mathe- matics	Boys	178	42.33	14.19	13	47.97	20.3	466	46.04	14.62	3.71	2.94	-1.93	-0.34	5.64	0.98
	Girls	193	43.73	12.63	12	48.02	15.35	543	45.25	13.04	1.52	1.42	-2.77	-0.62	4.29	0.95
	Diff.		-1.4			-0.05			0.79							
	Total	371	43.06	13.4	25	48	17.72	1009	45.62	13.79	2.56	3.12	-2.38	-0.67	4.94	1.37
	CR Value		1.00			0.01			0.90							
Langu- age	Boys	178	56.42	16.16	13	63.46	16.57	466	56.73	15.89	0.31	0.22	-6.73	-1.45	7.04	1.48
	Girls	193	58.02	15.07	12	63.75	14.16	543	54.15	14.43	-3.87	-3.1	-9.6	-2.32	5.73	1.35
	Diff.		-1.6			-0.29			2.58							
	Total	371	57.25	15.6	25	63.6	15.14	1009	55.34	15.17	-1.91	-2.03	-8.26	-2.69	6.35	2.03
	CR Value		-0.98			-0.05			2.68							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise

Environmental Studies

The data reveals that performance of ST students was better than students of Others category followed by SC category students and the differences in achievement were significant across the categories. There was no significant difference in achievement of girls across the categories. In Others category, the achievement of boys was significantly better than girls.

Mathematics

The performance of ST students was better than students of Others category followed by SC students. The difference in achievement were significant between Others vs SC. In case of performance of boys, there was significant difference in achievement between Others vs SC, favouring students of Others category. The genderwise differences were not found in any category.

Language

The data reveals that performance of ST students was better than SC students followed by students of Others category and differences in achievement were significant categorywise. The achievement of SC and ST girls was significantly better than girls of Others category. In others category, achievement of boys was significantly better than girls.

Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	178	58.92	17.49	13	68	14.24	466	59.33	16.65	0.41	0.27	-8.67	-2.15	9.08	2.18
	Girls	193	61.33	16.19	12	66.33	13.9	543	57.32	15.4	-4.01	-2.99	-9.01	-2.22	5	1.2
	Diff.		-2.41			1.67			2.01							
	Total	371	60.17	16.84	25	67.2	13.81	1009	58.25	16.01	-1.92	-1.9	-8.95	-3.19	7.03	2.43
	CR Value		-1.37			0.30			1.99							
Reading Comprehension	Boys	178	52.25	19.29	13	55.9	24.73	466	52.4	19.73	0.15	0.09	-3.5	-0.51	3.65	0.52
	Girls	193	52.5	19.82	12	59.45	16.44	543	48.88	17.86	-3.62	-2.24	-10.57	-2.2	6.95	1.4
	Diff.		-0.25			-3.55			3.52							
	Total	371	52.38	19.54	25	57.6	20.81	1009	50.51	18.82	-1.87	-1.59	-7.09	-1.69	5.22	1.22
	CR Value		-0.12			-0.43			2.95							

The data reveals that achievement of ST students was better than SC followed by students of Others category. The differences in achievement were significant in case of Others vs ST and ST vs SC. The difference in achievement of boys were significant between Others vs ST and ST vs SC favouring ST students. In case of achievement of girls, these differences were significant between Others vs SC and Others vs ST favouring SC and ST students, respectively. There was no significant difference in achievement between boys and girls within categories.

Reading Comprehension

The data reveals that there was no significant difference in achievement of students categorywise. In case of girls, the differences in achievement were significant between Others vs SC and Others vs ST favouring students of SC and ST categories. In Others category, the achievement of boys was significantly higher than girls.

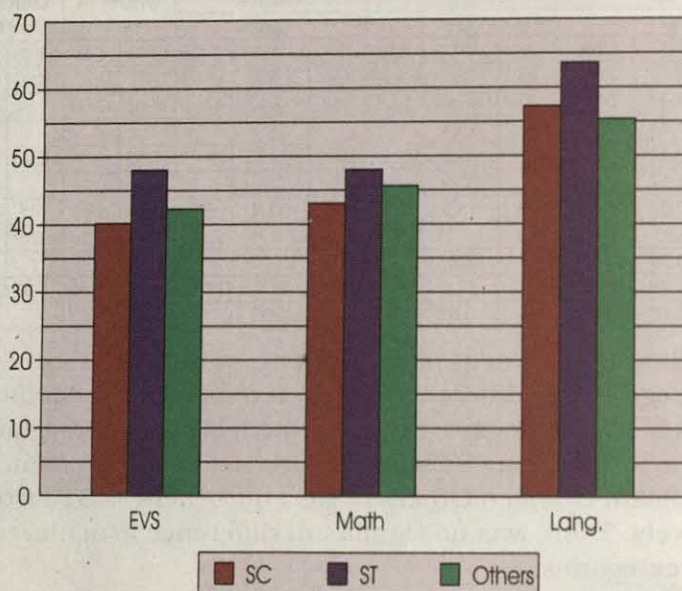
Area-wise and Categorywise Achievement

In this section, we shall discuss the achievement of students area-wise and categorywise. Table 21 illustrates the area-wise and category-wise achievement of students in EVS, Mathematics and Language. The performance of students in these subject is discussed in the ensuing paragraphs.

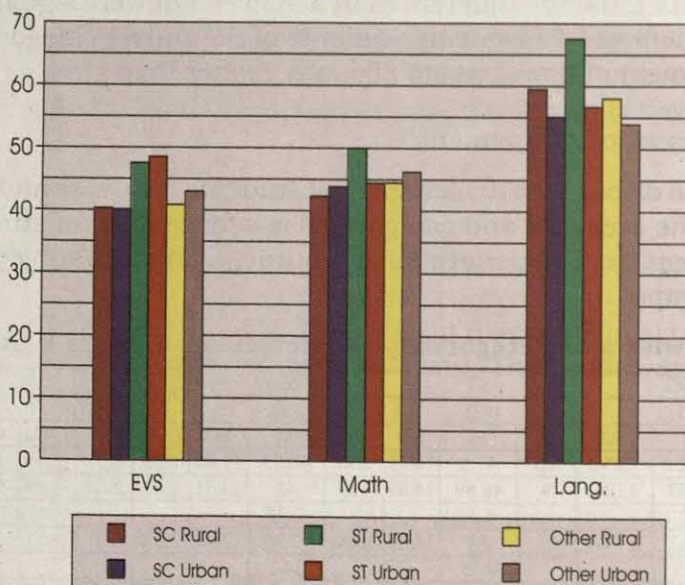
Table 21: Area-wise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	183	40.27	12.92	16	47.5	14.89	350	40.85	11.85	0.58	0.51	-6.65	-1.76	7.23	1.88
	Urban	188	40.07	13.47	9	48.89	14.09	659	43	13.51	2.93	2.63	-5.89	-1.25	8.82	1.84
	Diff.		0.2			-1.39			-2.15							
	Total	371	40.17	13.18	25	48	14.33	1009	42.25	12.99	2.08	2.61	-5.75	-1.99	7.83	2.66
	CR Value		0.15			0.23			2.61							
Mathematics	Rural	183	42.29	13.87	16	50	14.79	350	44.49	13.65	2.2	1.75	-5.51	-1.46	7.71	2.01
	Urban	188	43.8	12.92	9	44.44	22.58	659	46.21	13.84	2.41	2.22	1.77	0.23	0.64	0.08
	Diff.		-1.51			5.56			-1.72							
	Total	371	43.06	13.4	25	48	17.72	1009	45.62	13.79	2.56	3.12	-2.38	-0.67	4.94	1.37
	CR Value		1.08			0.66			1.90							
Language	Rural	183	59.48	17.29	16	67.5	11.76	350	58.04	15.98	-1.44	-0.94	-9.46	-3.09	8.02	2.5
	Urban	188	55.08	13.45	9	56.67	18.54	659	53.92	14.53	-1.16	-1.02	-2.75	-0.44	1.59	0.25
	Diff.		4.4			10.83			4.12							
	Total	371	57.25	15.6	25	63.6	15.14	1009	55.34	15.17	-1.91	-2.03	-8.26	-2.69	6.35	2.03
	CR Value		2.73			1.58			4.02							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in urban areas, the differences in achievement were significant only between Others vs SC students favouring students of urban areas. Within categories, differences in achievement between rural and urban students was significant only in case of Others category favouring urban students.

Mathematics

The data reveals that in urban areas, differences in achievement were significant only between Others vs SC students favouring SC students. In urban areas, the achievement of students of Others category was significantly better than SC students. Within categories, differences in achievement were not found to be significant between rural and urban students.

Language

The data reveals that in rural areas, performance of students of ST category was better than SC students followed by students of Others category and the differences in achievement were significant between Others vs ST and ST vs SC students. In urban areas, there was no significant difference in achievement across the categories. Within categories, the performance of rural students was better than urban students and differences in achievement were significant in SC and Others categories.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Grammar & Usage	Rural	183	62.27	18.85	16	71	10.58	350	60.53	16.72	-1.74	-1.05	-10.47	-3.75	8.73	2.92
	Urban	188	58.13	14.39	9	60.44	16.79	659	57.04	15.5	-1.09	-0.9	-3.4	-0.6	2.31	0.41
	Diff.		4.14			10.56			3.49							
	Total	371	60.17	16.84	25	67.2	13.81	1009	58.25	16.01	-1.92	-1.9	-8.95	-3.19	7.03	2.43
	CR Value		2.37			1.71			3.24							
Reading Comprehension	Rural	183	54.83	19.93	16	61.67	18.46	350	53.89	19.48	-0.94	-0.52	-7.78	-1.64	6.84	1.41
	Urban	188	50	18.91	9	50.37	23.83	659	48.71	18.22	-1.29	-0.83	-1.66	-0.21	0.37	0.05
	Diff.		4.83			11.3			5.18							
	Total	371	52.38	19.54	25	57.6	20.81	1009	50.51	18.82	-1.87	-1.59	-7.09	-1.69	5.22	1.22
	CR Value		2.39			1.23			4.11							

The data given in Table 25 reveals that in rural areas the performance of ST students was better than SC followed by students of Others category and the differences in achievement were significant between Others vs ST and ST vs SC students. In urban areas, there was no significant difference in achievement across the categories. Within categories, differences in achievement were significant between rural and urban students in SC and Others category favouring rural students.

Reading Comprehension

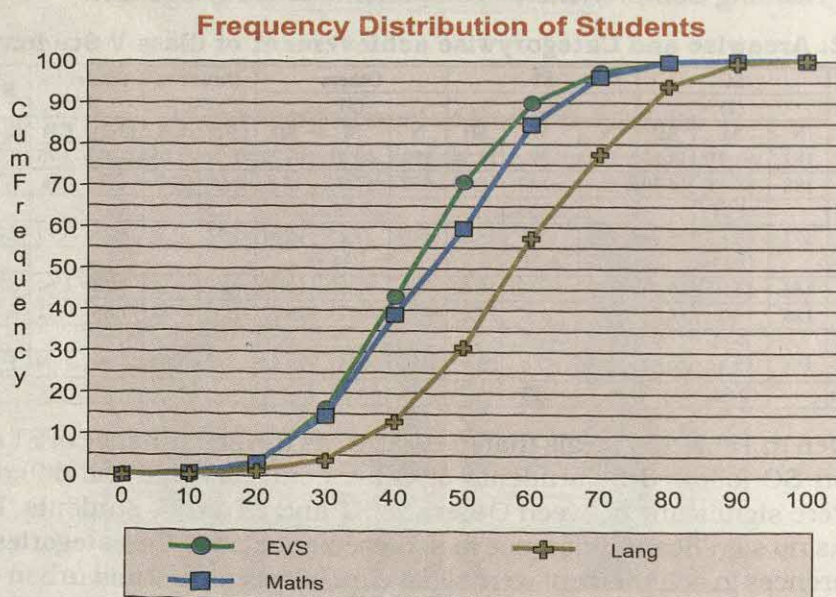
The data reveals that in both rural and urban areas, there was no significant difference in achievement across the categories. Within categories, the performance of rural students was better than urban students and the differences in achievement were significant in SC and Others category.

Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject	Achievement Level										
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	2	36	190	377	388	268	104	36	4	0
	cf	2	38	228	605	993	1261	1365	1401	1405	1405
	cf(%)	0.14	2.70	16.23	43.06	70.68	89.75	97.15	99.72	100	100
Math	f	6	39	159	343	291	351	161	51	4	0
	cf	6	45	204	547	838	1189	1350	1401	1405	1405
	cf(%)	0.43	3.20	14.52	38.93	59.64	84.63	96.09	99.72	100	100
Language	f	4	13	36	132	251	369	284	230	77	9
	cf	4	17	53	185	436	805	1089	1319	1396	1405
	cf(%)	0.28	1.21	3.77	13.17	31.03	57.30	77.51	93.88	99.36	100

The figures posted in Table 23 revealed that in language, the distribution of scores covered the entire range from 0-100 per cent. None of the students in EVS and Mathematics were in the range 90-100 per cent. The maximum number of cases in EVS (388), in Mathematics (351) and in Language (369) were in the range 40-50 per cent, 50-60 per cent and 50-60 per cent, respectively.



Classification of Test Items

Test items were classified according to the range of facility values in Table 24:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	6	0	9
25 to less than 50	Difficult	21	15	13
50 to less than 75	Average	12	18	13
75 to 100	Very Easy	1	7	3

No items in Language were found very difficult, but 15% items from EVS, 24% items from Mathematics were found very difficult. Besides, very few items from EVS and Mathematics and 18% items from Language were found very easy. However, rest of the items in each subject were either difficult or average.

Table 25: Distribution of Test Items according to DI

Range of DI	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	21	27	25
Less than .30	Poor Discrimination	19	13	13

No items were found to have good DI. But 53% from EVS, 68% from Language and 66% items from Mathematics had average value of D.I. Rest of the items in each subject had poor D.I. value i.e., 47% from EVS, 32% from Language and 34% from Mathematics.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.62	0.70
2	Mathematics	38	0.59	0.74
3	Language	40	0.67	0.78

The reliability co-efficient for EVS, Language and Mathematics is good alone.

Impact of Intervening Variables

School Related Variables

Availability of competency-based handbook and textbook influences the learning achievement of children in the three subjects. The positive association of percentage of female teachers with the EVS and Mathematics indicates that these help the children in improving their learning achievement in the two subjects. Community participation does help in learning Mathematics. Other variables do not contribute significantly. PTR is negatively associated with achievement.

Table 27: Regression and Correlation Co-efficient of the Predictors of School related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	18.790	--	4.292	--	27.310	--
PTR	-0.134	-0.048	-0.036	-0.106	-0.175	-0.221
Com Participation	0.580	0.012	0.417*	0.017*	0.762	0.038
Teach-aid	0.147	0.081	0.035	0.067	0.039	0.013
Physical facility	1.792	0.098	2.027	0.177	2.014	0.097
Ancillary facility	0.045	0.062	0.014	0.156	0.023	0.118
Instructional time	0.017	0.226	0.014	0.040	0.097	0.240
Working day	0.015	0.142	0.011	0.010	0.099	0.256
Index-Comp. TLM	4.059**	0.302*	5.439**	0.294*	-4.235*	-0.349*
R²	0.245		0.257		0.240	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 24.5% of total variance in EVS, 25.7% in Mathematics and 24.0% in Language separately.

Teacher Related Variables

Only index of teaching experience and teacher's training influence the learning achievement of children in language. The positive association of the variable with the language indicates that teaching experience and teachers' training help the children in improving their learning achievement in language only. Teachers' qualification, teaching aids and teaching style of teachers and help of senior colleagues from school organisation did not help the children in improving their learning achievement in the three subjects.

Table 28: Regression and correlation Co-efficient of the Predictors of Teacher related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	42.831	--	46.887	--	56.436	--
Index-Qualification	0.431	0.030	0.653	0.040	0.615	0.036
Index-Experience	0.823	0.088	2.315	0.152	3.208*	0.238*
Index-Teaching Aid	0.860	0.068	0.295	0.041	10.152	0.114
Index-School Org.	0.045	0.007	0.023	0.010	0.168	0.021
R²	0.011		0.044		0.063	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 1.1% of total variance in EVS, 4.4% in Mathematics and 6.3% in Language separately.

Pupil Related Variables

Percentage attendance of children in school, school practices and academic assistance provided by family members and teaching-learning processes adopted by teachers influence the learning achievement of children in the three subjects. The positive association schooling practices and percentage of students attendance help in improving their learning achievement in three subjects.

Table 29: Regression and Correlation Co-efficient of the Predictors of Pupil related variables with the criterions

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	24.587	--	13.992	--	26.113	--
Index-Ed & Occu	0.779	0.024	0.429	0.027	0.056**	0.123**
Index-Schooling	0.064**	0.071**	0.026	0.008	0.185*	0.084*
Index-TLP	0.610	0.015	0.654	0.027	3.583**	0.109**
Age	-0.027	-0.006	-0.449	-0.002	-0.125**	-0.095**
Detention	-0.497**	-0.116	-0.227**	-0.139**	-0.714**	-0.0127**
Attendance	0.164**	0.111**	0.293*	0.194**	0.211	0.114**
R²	0.033		0.056		0.066	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 3.3% of total variance in EVS, 5.6% in Mathematics and 6.6% in Language.

One can infer from the above analysis that attending school regularly by children and teaching learning material help the children in improving their learning achievement in the three subjects.

Hard Spot of Learning

In EVS, question number 12, 18, 21, 27, 28 and 38 were found very difficult and 21 (52%) items were found difficult. The hard spots were found in almost all units.

In Language, no item was found very difficult, whereas 15(38%) items were found difficult. The hard spots were: structure, comprehension of instructions, time table, informational passage and story.

In Mathematics, 9 (23%) items were found very difficult and 13(33%) items were found difficult. The hard spots were: number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

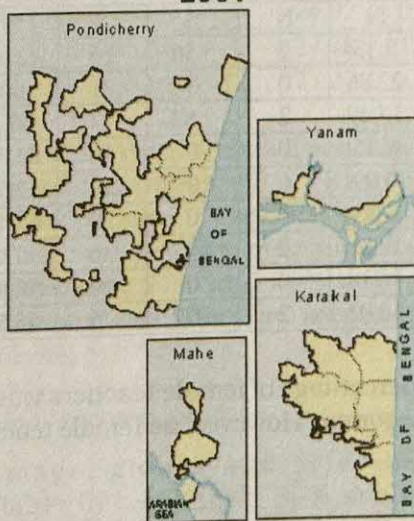
Analysis of the results signified that

- Number of female teachers was more than male teachers in sampled schools.
- Approximately, 90% students were attending schools more than 80% working days.
- Maps, charts, globes and children books were available in most of the schools.
- Chairs and Tables for teachers, black board and chalk and duster were available in all schools.
- Computers and T.Vs, were available in 42% to 52% schools
- Competency-based textbooks were more available than workbooks, Teacher's handbooks and Teaching-aids, in the schools
- All OBC boys were getting mid day meal.
- Average number of working days in school was 233 days in an academic session.
- Parent Teacher Association were more in rural schools than urban schools.
- Female teachers were more than male teachers.
- Average teachers per school was more in urban than rural schools.
- Teacher-pupil ratio was almost same in both areas.
- Not a single male teacher was post graduate.
- Not a single male teacher was below Class X passed,
- 2/3 teacher were diploma/certificate holder in primary/elementary,
- No male teacher was M.Ed. degree holder.
- Teaching aids were more available to male teachers than female teachers in both rural and urban areas.
- Maximum teachers were trained by SIE.
- Maximum Programmes were conducted on the theme 'General Training'.
- About one half teachers have not attended any in-service training programme during last three years.
- A large number of teachers getting assistance from Head of School as compared to other sources.
- Approximately, one third parents were educated upto secondary level.
- Majority of mothers were house wives.
- Majority of fathers were skilled workers.

- Girls get more academic assistance from family members than boys.
- Students get more help from fathers than mothers.
- Majority of teachers considered in-service training as 'Highly' effective in improving teaching skills as well as utility of knowledge gained during the training programmes.
- The performance of ST students was better in all the three subjects than SC and Other category students.
- Attending school regularly help the children in improving their learning achievement in the three subjects.

Introduction

The Union Territory of Pondicherry is comprised of four regions viz Pondicherry, Karakal, Mahe and Yanam. In the absence of a State Board of Education, each of these regions has its affiliation to the neighbouring states for academic purposes such as textbooks, public examinations, etc. Accordingly, Pondicherry and Karakal with Tamil as regional language are affiliated to Tamil Nadu, Mahe with Malayalam as regional language is affiliated to Kerala and Yanam with Telugu as regional language is affiliated to Andhra Pradesh.

**PONDICHERRY
2001**

The UT Pondicherry is marching towards quality education under SSA. Pondicherry in determined to attain the prime goal of UEE by 2010. The total number of primary teachers are 2,290. The student population at primary level is 48,527 and at middle level is 41,753.

Sample

The information collected from sampled schools, teachers and students through various tools developed for the achievement survey is presented as under:

Schools

A total of 44 schools were sampled from U.T. Pondicherry. Out of total sampled schools 26 schools were from rural areas and remaining 18 from urban areas.

Areawise and managementwise distribution of schools is shown in Table 1.

Table 1: Distribution of Schools on the basis of Area and Management

Area	Total School	State Govt./ Govt. Aided		Zila Parishad/ Panchayat		Local Body/ Municipal Corp./ Urban Body	
		N	%	N	%	N	%
Rural	26	26	100	0	0	0	0
Urban	18	18	100	0	0	0	0
Total	44	44	100	0	0	0	0

Teachers

A total of 116 teachers were sampled from 44 sampled schools. Out of 116 teachers, 48 were male teachers and 68 were female teachers. Areawise, 71 teachers were from rural areas and 45 teachers were from urban areas.

Table 2: Categorywise and Genderwise Distribution of Sampled Teachers

Area	Gender	Category of Teachers								Total
		SC		ST		OBC		Others		
		N	%	N	%	N	%	N	%	
Rural	Male	3	8.33	2	5.56	26	72.22	5	13.89	36
	Female	8	22.86	0	0	21	60	6	17.14	35
	Total	11	15.49	2	2.82	47	66.2	11	15.49	71
Urban	Male	1	8.33	0	0	10	83.33	1	8.33	12
	Female	3	9.09	0	0	19	57.58	11	33.33	33
	Total	4	8.89	0	0	29	64.44	12	26.67	45
Total	Male	4	8.33	2	4.17	36	75	6	12.5	48
	Female	11	16.18	0	0	40	58.82	17	25	68
	Total	15	12.93	2	1.72	76	65.52	23	19.83	116

Table 2 shows that the percentage of female teachers was higher than male teachers in case of SC and Other categories. However, no female teacher figured in ST category.

Students

A total number of 1,262 students appeared in each of the three tests in EVS, Language and Mathematics. Table 3 gives the account of the students genderwise and areawise.

Table 3: Districtwise Distribution of Sampled Students

District	Area	Number of Class V Students		
		Boys	Girls	Total
Pondicherry	Rural	401	356	757
	Urban	248	257	505
	Total	649	613	1262
Total	Rural	401	356	757
	Urban	248	257	505
	Total	649	613	1262

Out of 1,262 students, 757 students were from rural areas and remaining 505 were from urban areas. Out of the total sample, 649 were boys and 613 were girl students.

Profiles

This section deals with the profile of sampled schools, teachers and students.

School Profile

The profile of the sampled schools is given in Table 4.

Table 4: Distribution of Schools on the basis of their Terminal Stage

Area	Pre primary classes Attached		Terminal Stage of School							
			Primary		Elementary		Secondary		Sr. Secondary	
	N	%	N	%	N	%	N	%	N	%
Rural	5	19.23	19	73.08	7	26.92	0	0	0	0
Urban	2	11.11	10	55.56	5	27.78	1	5.56	2	11.11
Total	7	15.91	29	65.91	12	27.27	1	2.27	2	4.55

Table 4 indicates that out of 26 rural sampled schools, pre-schools were attached with only 5 schools. Whereas in urban areas, out of 18 sampled schools, it was attached with 2 schools. Further, approximately 73% schools in rural areas and 56% schools in urban areas were only primary schools. The percentage of elementary schools in the sampled schools was approximately 27% and 28% respectively for rural and urban areas. However, no school having secondary/sr. secondary classes was included in the sample from the rural areas.

Facilities related to teaching-learning process

It was observed that maps, globes and reference books, dictionaries, encyclopaedia were available in more than 89% schools. Magazines, journals and newspaper were available only in 43% schools. Mini tool kit, primary science kit, charts and maths kit were available in 70% to 75% schools. Besides, play material and toys were available in 59% schools. Game equipments were available in 68% schools.

Infrastructural facilities

It was observed that school bell, chalk, duster and blackboard were available in 98% schools, whereas, tables and chairs for teachers, were available in 84% schools. Music instrument, play ground, and pin-up board and notice board were available in 53% to 50% schools. Further, water pitcher, ladel and glasses and dustbin were available in 66% and 68% schools.

Ancillary Facilities

Computer was available in only 5% schools. Electric connection for the schools, safe drinking water and immunisation facilities were available in 91% and 93% schools, respectively. Toilet facilities were available in 77% schools. Besides, facilities like separate toilet for girls and annual medical check up for children were available in 66% to 68% schools. However, first aid kit was available in 50% schools and T.V. was available in 45% schools.

Competency Based Teaching Materials

Information gathered shows that out of 44 schools, competency-based textbooks were available in 17 to 18 schools for Classes I to V in the year 2001, against in none to 1 school for Classes I to V in the year 1998.

Workbooks were available in one school in the year 2001 as compared with no school in the year 1998 for Classes I to V. The teachers' handbooks were available in one school in the year 2001 against no school in the year 1998 for primary classes. Besides, teaching aids were available in 8 to 9 schools in 2001, against in no school in 1998.

Incentive Scheme

The Table 5 depicts the categorywise and genderwise number of students receiving facilities under various incentive schemes.

Table 5: Number of Children receiving facilities under Incentive Schemes

Incentive Schemes		SC		ST		OBC		Others		Total	
		B	G	B	G	B	G	B	G	B	G
Mid-day meal	N	1296	1307	0	0	4347	4353	231	287	5874	5947
	%	22.06	21.98	0	0	74.00	73.20	3.94	4.82	100	100
Free uniform	N	1299	1316	0	0	4213	4265	195	199	5707	5780
	%	22.76	22.77	0	0	73.82	73.79	3.42	3.44	100	100
Free textbooks	N	1288	1316	0	0	4200	4374	199	201	5687	5891
	%	22.65	22.34	0	0	73.85	74.25	3.50	3.41	100	100
Scholarship for regular attendance	N	250	493	0	0	325	349	110	64	685	906
	%	36.50	54.42	0	0	47.45	38.52	16.05	7.06	100	100
Other Schemes	N	158	293	0	0	281	284	1	0	440	577
	%	35.91	50.78	0	0	63.86	49.22	0.33	0	100	100

Above table indicates that across the categories both boys and girls from OBC category were getting maximum benefit from all the available schemes and this trend was reverse in case of ST category. However, not a single pupil figured in this state.

Instructional Time

Average number of working days in schools was approximately 192 days on an average, schools were having 7 periods in a day of approximately 45 minutes duration.

Educational Committees

The data given in the Table 6 reveals that out of total 26 rural schools, 5(11.36%) schools were having Village Education Committees (VEC). Parent Teacher Association was in approximately in 86% schools. Area Education Committees and School-Management Committees were found in 7% and 11% schools, respectively.

Table 6: Schools having Education Committees

Committee		Area		
		R	U	T
VEC	N	4	1	5
	%	15.38	5.56	11.36
AEC	N	3	0	3
	%	11.54	0	6.82
SMC	N	4	1	5
	%	15.38	5.56	11.36
PTA	N	23	15	38
	%	88.46	83.33	86.36

Teachers Profile

In this section teachers profile in the sampled schools has been discussed.

Table 7: Number of Teachers on Roll

Area	No of sampled School	Number of Teachers on Roll						Pupil Teacher Ratio
		Male		Female		Total	Average Teachers per School	
		N	%	N	%			
Rural	26	116	56.04	91	43.96	207	8	30
Urban	18	60	35.93	107	64.07	167	9	27
Total	44	176	47.06	198	52.94	374	8	29

Table 7 shows that number of male teachers was more than female teachers in rural area schools. However, the number of female teachers in schools in urban areas was more than male teachers. The average number of teachers per school in rural and urban areas was 8 and 9, respectively. Further, average pupil-teacher ratio was 29:1. However, this ratio was approximately 30:1 in rural schools.

Educational Qualification

The percentage of female teachers holding PG degree was more than male teachers. The trend was reverse for teacher holding graduation degree and sr. secondary certificate. Further, percentage of female teachers who studied upto secondary level was higher than their counterparts. However, no teacher was below Class XII certificate holder. The data is given in Table 8.

Table 8: Educational Qualification of Teachers

Gender	Qualifications										Total
	Below Class 10		Class 10		+2		Graduate		PG		
	N	%	N	%	N	%	N	%	N	%	
Male	0	0	5	10.42	13	27.08	15	31.25	15	31.25	48
Female	0	0	13	19.12	15	22.06	15	22.06	25	36.76	68
Total	0	0	18	15.52	28	24.14	30	25.86	40	34.48	116

Subjectwise Educational Qualification

Table 9 presents the percentage of teachers according to level up to which they had studied different subjects i.e., Mathematics, Science, Language and Social Sciences.

Table 9: The Level upto which various Subjects Studied

Subject	Gender	Standards								Total
		Below 10		Class 10		+2		Degree		
		N	%	N	%	N	%	N	%	
Maths	Male	0	0	15	31.25	24	50	9	18.75	48
	Female	0	0	37	54.41	24	35.29	7	10.29	68
	Total	0	0	52	44.83	48	41.38	16	13.79	116
Science	Male	0	0	20	41.67	21	43.75	7	14.58	48
	Female	0	0	30	44.12	32	47.06	6	8.82	68
	Total	0	0	50	43.1	53	45.69	13	11.21	116
Language	Male	0	0	6	12.5	20	41.67	22	45.83	48
	Female	1	1.47	18	26.47	21	30.88	28	41.18	68
	Total	1	0.86	24	20.69	41	35.34	50	43.1	116
Social Science	Male	0	0	28	58.33	13	27.08	7	14.58	48
	Female	0	0	39	57.35	19	27.94	10	14.71	68
	Total	0	0	67	57.76	32	27.59	17	14.66	116

The data reveals that in Mathematics, Language and Science the percentage of male teachers who studied these subject upto degree level was more than female teachers. However, this was reverse in case of Social Science. Similarly, the percentage of male teachers who studied Mathematics, and Language upto higher secondary level was more than female teachers. The trend was reverse for Science and Social Science at higher secondary level. Besides, the percentage of female teachers who studied Mathematics, Language and Science upto Class X was more than female teachers. Only one female teacher had studied Language below Class X level.

Professional Qualification

Distribution of sampled teachers on the basis of their professional qualifications is given in table 10.

Table 10: Professional Qualification of Teachers

No. of Sampled Schools	Gender	Number of Teachers		
		Diploma/ Certificate in Primary/ Elem. Education	B.Ed.	M.Ed.
44	Male	31	17	3
	Female	47	22	3
	Total	78	39	6

The majority of teacher had diploma/certificate in Primary/Elementary Education and very few teachers were having M.Ed degree. Besides, approximately, half of the teachers had B.Ed degree.

Availability of Teaching Aids

Data collected indicates that all teaching aids were available to more than 85% teachers in urban schools except Others. However, charts were available to all. Similarly, teaching aids were available to more than 91% teachers in rural schools, except for flash cards, Science kit, Mathematics kit and others. Genderwise, all teaching aids such as teachers' guide, dictionary, globe, flash cards, Science kit, Mathematics kit were more available to female teachers teaching in urban schools than male teachers, except for books other than textbooks and charts. The trend was almost similar in rural areas, except for maps, charts, flash cards and others.

In-service Training

The account of in-service training programmes organised by various agencies for teachers' during last three years is presented in Table 11.

Table 11: In-service Training Programmes

Organisers who provided training		No. of trained Teachers
School Complex	N	0
	%	0
Block Resource Centre	N	0
	%	0
Teacher Resource Centre	N	0
	%	0
Cluster Resource Centre	N	0
	%	0
DIET	N	75
	%	64.66
SCERT	N	0
	%	0
Others	N	17
	%	14.66

Data portrays 92 teachers were trained during last three years. Approximately, 65% teachers were trained by DIET and 15% by Other sources.

Table 12: Themewise Distribution of In-service Training Programmes

Theme	Programmes
General Training Programme	15
Content Enrichment	42
Production of Instructional Material	5
Use of Instructional Material	4
Assessment of Pupil Learning	5
Competency based Teaching Learning	18
Activity based Joyful Learning	24
Others	19

During in-service training programmes number of themes were covered. Maximum in-service training programmes were conducted on 'Content Enrichment' followed by 'Activity-based Joyful Learning'. But Minimum programmes were conducted on 'Use of Instructional Material'.

Out of 116 sampled teachers, 33(28.45%) teachers were without any in-service training during last three years. The percentage of male and female teachers who have not attended any in-service programme was 25% and 31%, respectively. In rural areas, teachers who had not attended any in-service training programme was 22% and 20% for male and female, respectively. However, percentage of teachers in urban schools was 33% and 42% respectively for male and female teachers.

The effectiveness of various training programmes is given in Table 13:

Table 13: Impact of Training Programme on Teachers Effectiveness

Extent of Impact		Utility of Knowledge gained	Improvement in Teaching Skills		
			EVS	Lang.	Math
High	N	55	41	38	43
	%	66.26	49.40	45.78	51.81
Average	N	26	36	38	34
	%	31.33	43.37	45.78	40.96
Low	N	2	6	7	6
	%	2.41	7.23	8.43	7.23

It is evident that approximately 31% training programmes were Average effective in terms of utility of knowledge gained during training programmes. Approximately, 66% programmes were considered as 'Highly' useful. The impact of these training programmes was rated as Average by 41% to 46% teachers in different subjects. However, improvement in teaching-skills in all subjects due to these training programmes was rated 'High' by 46% to 52% teachers.

Academic Assistance received from Various Sources

Data collected shows that teachers both in rural and urban areas were getting maximum assistance from 'Head of the School' and it was followed by 'Other teachers of the School'. From other sources they were getting assistance 'sometimes'.

Students Profile

Profile of sampled students has been discussed in this section.

Medium of Instruction

It was observed that medium of instruction for approximately 98% students in the schools was same as the Language spoken at home.

Educational Level of Parents

Educational level of sampled students' parents has been presented in Table 14.

Table 14: Educational Levels of Student's Parents

Educational Level	Father		Mother	
	N	%	N	%
Not Applicable	14	1.10	1	0.79
Illiterate	191	15.13	323	25.59
Literate	52	4.12	75	5.94
Primary	372	29.48	441	34.94
Secondary	472	37.40	340	26.94
Sr. Secondary	111	8.80	52	4.12
Degree and above	30	2.38	13	1.03
Donot Know/Cannot say	20	1.58	17	1.34

Table 14 indicates that approximately 15% fathers and 26% mothers of the students were illiterate. Only 2% fathers and 1% mothers were having degree or higher educational qualifications. Further, majority of the remaining parents were educated either upto primary level or secondary level. Educational level of mothers were poorer than fathers.

Occupation of Parents

This information is presented in Table 15.

Table 15: Occupations of the Student's Parents

Occupation	Father			Mother		
	R	U	T	R	U	T
Not Applicable	50	11	61	35	64	99
Household/ Housewife	338	210	548	12	53	65
Farmer	9	1	10	43	0	43
Poultry farming	1	0	1	1	0	1
Agricultural labour	194	16	210	238	41	279
Picking forest produce	0	1	1	1	1	2
Domestic Servent	15	42	57	5	8	13
Street Vender	7	10	17	19	12	31
Manual unskilled worker	52	57	109	97	53	150
Skilled worker	22	67	89	124	170	294
Clerical worker	4	4	8	12	6	18
Shopkeeper	2	20	22	29	33	62
Employer	0	5	5	8	8	16
Manager/Senior Officer	3	13	16	11	11	22
Others	60	48	108	122	45	167

In rural areas more mothers were Agricultural labourer and fathers were doing household work. In urban areas, more of mother parents were skilled workers and father parents were household workers. Only few mothers and fathers were Manager/ Senior Officers. In decreasing order, fathers were working as agricultural labour, manual unskilled worker, others skilled worker, domestic servant, shopkeeper and street vendor etc. In decreasing order, mothers were working as skilled worker, Agricultural labour, others, manual unskilled worker, housewife, shopkeeper, farmer and street vendor etc.

Academic Assistance received from Family Members and Others

The information collected from students regarding academic assistance they were getting have been analysed and presented in Table 16.

Table 16: Academic Assistance received from Family Members

Family Member		Rural		Urban		Total	
		Boys	Girls	Boys	Girls	Boys	Girls
Father/Guardian	N	97	101	50	65	147	166
	%	24.19	28.37	20.16	25.29	22.65	27.08
Mother	N	62	64	56	83	118	147
	%	15.46	17.98	22.58	32.3	18.18	23.98
Elder Brother/Sister	N	142	102	73	67	215	169
	%	35.41	28.65	29.44	26.07	33.13	27.57
Others	N	27	36	21	22	48	58
	%	6.73	10.11	8.47	8.56	7.4	9.46

Girls and boys both in rural and urban as well as overall were getting more help from elder brother/sister than any other. However, girls were getting more academic assistance from father, than boys. The descending order of academic assistance provided by the family members was elder brother and sisters, fathers and mothers.

Attendance

The role of attendance is very crucial. It is observed that the percentage of girls attending school between 90-100% of working days was less than boys. It was also true for both rural and urban areas. However, the percentage of girls attending school between 80-90% of working days was more than boys. Approximately, 4% boys and girls were attending schools less than 60% of total working days. Approximately, 88% students were attending school for more than 70% of working days.

Students Achievement

This section presents the achievement of Class V students in Environmental Studies (EVS), Mathematics and Language on the competency-based achievement tests administered during the achievement survey conducted in the year 2002 in Pondicherry. The Language test has two components, namely Grammar and Usage and Reading Comprehension. In terms of mean percentage, the performance of students areawise, genderwise and categorywise is presented here. Further distribution of frequencies and cumulative frequencies against different intervals ranging from 0 to 100 has also been discussed.

Genderwise and Areawise Achievement

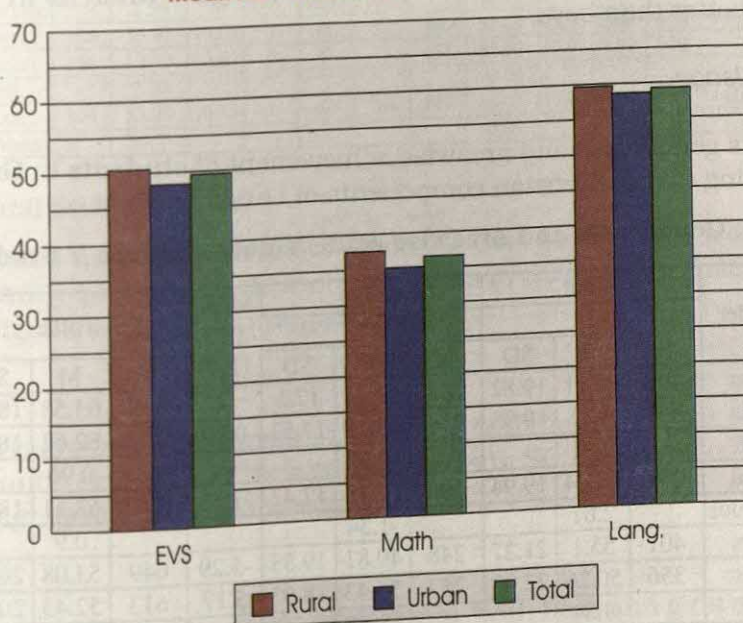
Table 17 illustrates the genderwise and areawise achievement of Class V students in EVS, Mathematics and Language. The performance of students in different subjects is discussed in the ensuing paragraphs.

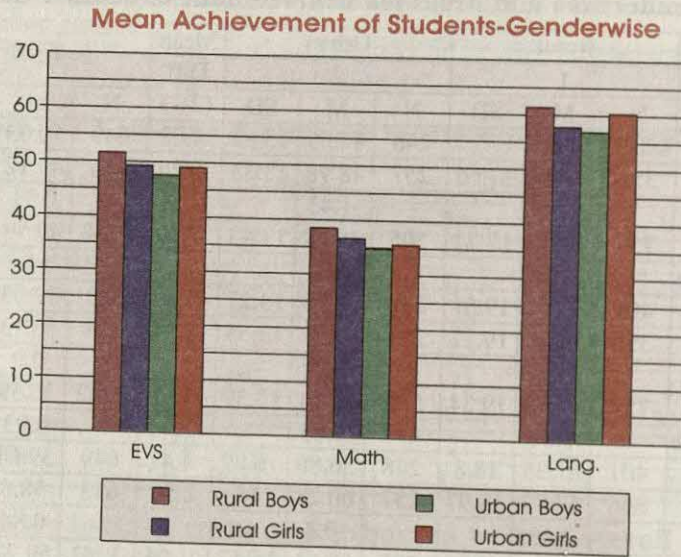
Table 17: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
EVS	Boys	401	51.57	17.77	248	47.55	13.52	-4.02	649	50.03	16.38	-3.26
	Girls	356	49.22	17.66	257	48.98	13.33	-0.24	613	49.12	15.98	-0.19
	Diff.		2.35			-1.43				0.91		
	Total	757	50.47	17.74	505	48.28	13.43	-2.19	1262	49.59	16.19	-2.49
	CR Value		1.82			-1.2				1		
Mathe- matics	Boys	401	38.44	19.51	248	34.75	13.27	-3.69	649	37.03	17.47	-2.86
	Girls	356	36.56	19.12	257	35.52	13.53	-1.04	613	36.13	17	-0.79
	Diff.		1.88			-0.77				0.9		
	Total	757	37.55	19.34	505	35.14	13.39	-2.41	1262	36.59	17.24	-2.62
	CR Value		1.34			-0.65				0.93		
Langu- age	Boys	401	61.35	18.8	248	56.88	16.09	-4.47	649	59.64	17.93	-3.22
	Girls	356	57.72	18.97	257	60.28	16	2.56	613	58.8	17.81	1.81
	Diff.		3.63			-3.4				0.84		
	Total	757	59.65	18.95	505	58.61	16.12	-1.04	1262	59.23	17.87	-1.05
	CR Value		2.64			-2.38				0.83		

Environmental Studies

The data reveals that achievement of rural students as well as rural boys was significantly better than their urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Mean Achievement of Students-Areawise



Mathematics

The data reveals that achievement of rural students as well as rural boys was significantly better than their urban counterparts. Within rural and urban areas, there was no significant difference in achievement between boys and girls.

Language

The data reveal that achievement of rural boys was significantly better than urban boys. There was no significant difference in achievement between rural and urban girls. In rural areas boys performed significantly better than girls whereas in urban areas girls performed better than boys.

Grammar and Usage

Table 18 displays genderwise and areawise achievement of students in Grammar and Usage and Reading Comprehension components of Language Test.

Table 18: Genderwise and Areawise achievement of Class V Students

Subject	Gender	Rural			Urban			Mean Diff (2-1)	Total			CR Value
		1			2				N	M	SD	
		N	M	SD	N	M	SD					
Grammar & Usage	Boys	401	65.11	19.82	248	61.11	17.3	-4	649	63.58	18.98	-2.71
	Girls	356	62.2	19.98	257	63.19	17.52	0.99	613	62.62	18.98	0.65
	Diff.		2.91			-2.08				0.96		
	Total	757	63.74	19.94	505	62.17	17.42	-1.57	1262	63.11	18.98	-1.48
	CR Value		2.01			-1.34				0.9		
Compre- hension	Boys	401	55.1	21.27	248	49.81	19.53	-5.29	649	53.08	20.77	-3.24
	Girls	356	50.26	22.02	257	55.43	18.93	5.17	613	52.43	20.92	3.11
	Diff.		4.84			-5.62				0.65		
	Total	757	52.82	21.75	505	52.67	19.41	-0.15	1262	52.76	20.84	-0.13
	CR Value		3.07			-3.28				0.55		

The data reveals that achievement of rural boys was significantly better than urban boys. There was no significant difference between achievement of rural and urban girls. In rural areas, boys performed significantly better than girls.

Reading Comprehension

The data reveals that performance of rural boys was significantly better than urban boys whereas urban girls performed significantly better than rural girls. In rural areas, boys performed significantly better than girls whereas in urban areas girls performed significantly better than boys.

Genderwise and Categorywise Achievement

Table 19 illustrates the genderwise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students in these subjects is discussed in the ensuing paragraphs.

Table 19: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)			(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
EVS	Boys	158	47.74	15.52	1	67.5	0	490	50.74	16.6	3	2.08	-16.76	-22.35	19.76	16
	Girls	156	44.36	13.07	0	0	0	457	50.74	16.55	6.38	4.9				
	Diff.		3.38						0							
	Total	314	46.06	14.43	1	67.5	0	947	50.74	16.57	4.68	4.79	-16.76	-31.13	21.44	26.33
	CR Value		2.09			0.00			0.00							
Mathematics	Boys	158	33.36	12.81	1	36.84	0	490	38.21	18.6	4.85	3.67	1.37	1.63	3.48	3.41
	Girls	156	29.98	10.73	0	0	0	457	38.22	18.2	8.24	6.81				
	Diff.		3.38						-0.01							
	Total	314	31.68	11.93	1	36.84	0	947	38.22	18.4	6.54	7.26	1.38	2.31	5.16	7.66
	CR Value		2.54			0.00			-0.01							
Language	Boys	158	55.41	17.07	1	60	0	490	61.01	18.03	5.6	3.54	1.01	1.24	4.59	3.38
	Girls	156	52.15	15.61	0	0	0	457	61.07	17.97	8.92	5.92				
	Diff.		3.26						-0.06							
	Total	314	53.79	16.42	1	60	0	947	61.03	17.99	7.24	6.61	1.03	1.76	6.21	6.7
	CR Value		1.77			0			-0.05							

Environmental Studies

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC category. In SC category, boys performed significantly better than girls.

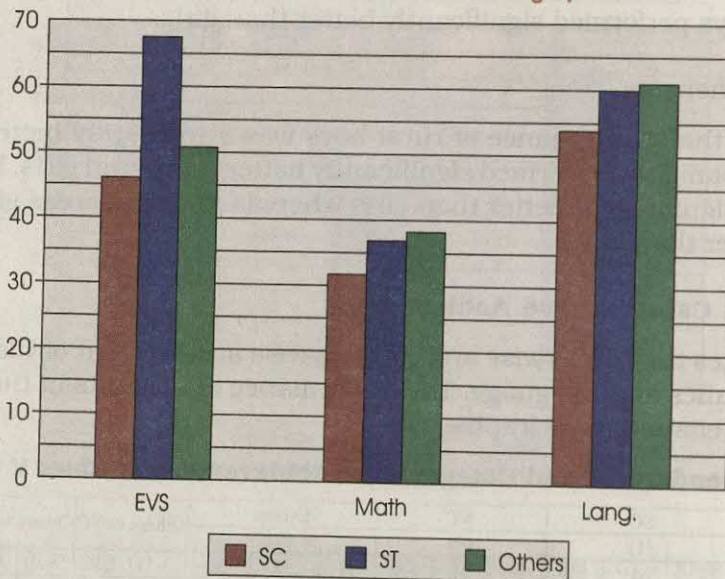
Mathematics

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC category. In SC category, boys performed significantly better than girls.

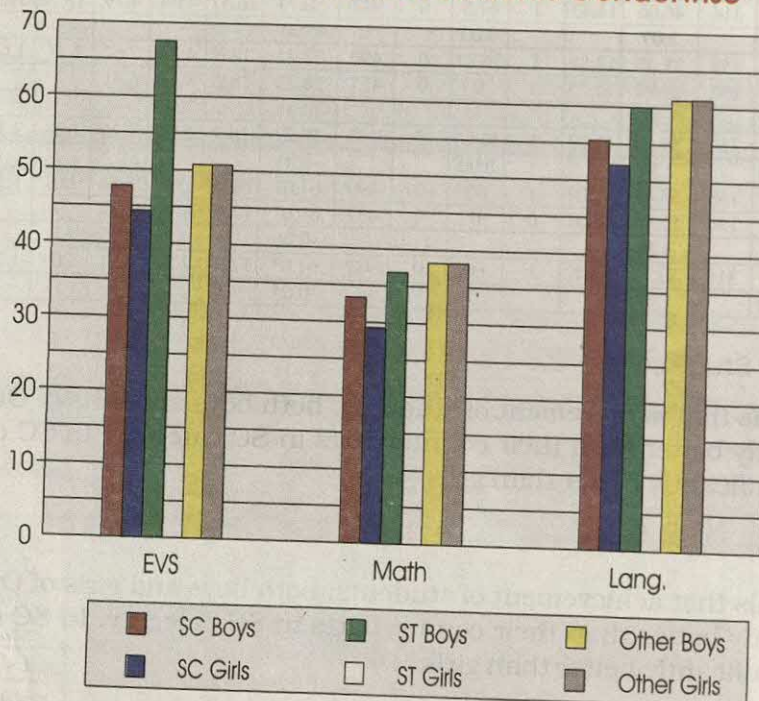
Language

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC category. Within categories, there was no significant difference in achievement of boys and girls.

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Genderwise



Grammar and Usage

Table 20 displays genderwise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 20: Genderwise and Categorywise achievement of Class V Students

Subject	Gender	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
Gram-mar & Usage	Boys	158	58.68	19.03	1	72	0	490	65.14	18.73	6.46	3.72	-6.86	-8.11	13.32	8.8
	Girls	156	55.13	17.12	0	0	0	457	65.17	18.93	10.04	6.15				
	Diff.		3.55						-0.03							
	Total	314	56.92	18.16	1	72	0	947	65.16	18.82	8.24	6.9	-6.84	-11.18	15.08	14.71
	CR Value		1.74						-0.02							
Reading Comprehnson	Boys	158	49.96	19.41	1	40	0	490	54.11	21.12	4.15	2.29	14.11	14.79	-9.96	-6.45
	Girls	156	47.18	18.96	0	0	0	457	54.22	21.27	7.04	3.88				
	Diff.		2.78						-0.11							
	Total	314	48.58	19.21	1	40	0	947	54.16	21.18	5.58	4.35	14.16	20.57	-8.58	-7.91
	CR Value		1.29						-0.08							

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC category. Within categories, there was no significant difference in achievement of boys and girls.

Reading Comprehension

The data reveals that achievement of students, both boys and girls of Others category was significantly better than their counterparts in SC category. Within categories, there was no significant difference in achievement of boys and girls.

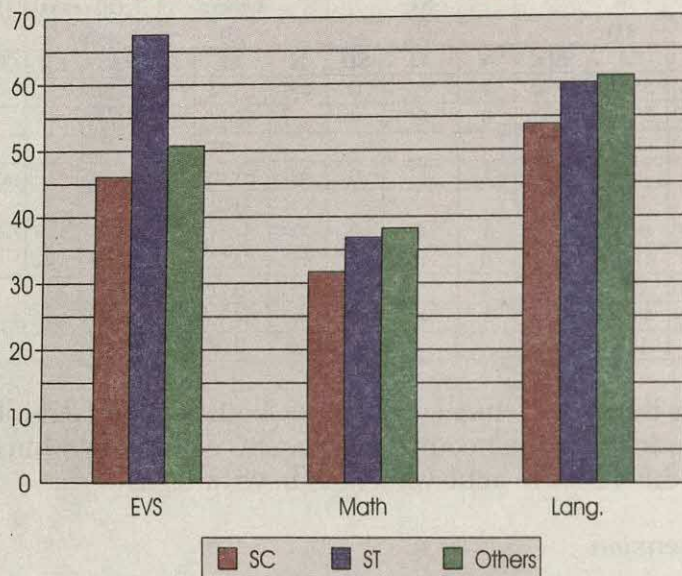
Areawise and Categorywise Achievement

Table 21 illustrates the areawise and categorywise achievement of Class V students in EVS, Mathematics and Language. The performance of students is discussed in the ensuing paragraphs.

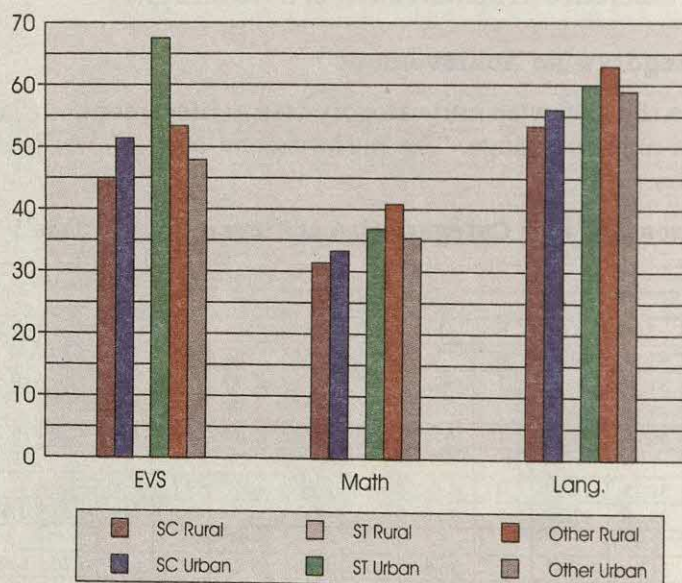
Table 21: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)			(3)								
		N	M	SD	N	M	SD	N	M	SD	(3-1)	CR	(3-2)	CR	(2-1)	CR
EVS	Rural	260	44.96	14.57	0	0	0	497	53.35	18.57	8.39	6.83				
	Urban	54	51.34	12.59	1	67.5	0	450	47.87	13.47	-3.47	-1.9	-19.63	-30.91	16.16	9.43
	Diff.		-6.38						5.48							
	Total	314	46.06	14.43	1	67.5	0	947	50.74	16.57	4.68	4.79	-16.76	-31.13	21.44	26.33
	CR Value		-3.29						5.23							
Mathematics	Rural	260	31.35	11.69	0	0	0	497	40.8	21.63	9.45	7.8				
	Urban	54	33.28	12.99	1	36.84	0	450	35.36	13.45	2.08	1.11	-1.48	-2.33	3.56	2.01
	Diff.		-1.93						5.44							
	Total	314	31.68	11.93	1	36.84	0	947	38.22	18.4	6.54	7.26	1.38	2.31	5.16	7.66
	CR Value		-1.01						4.69							
Language	Rural	260	53.33	16.58	0	0	0	497	62.95	19.29	9.62	7.16				
	Urban	54	56.02	15.55	1	60	0	450	58.92	16.19	2.9	1.29	-1.08	-1.42	3.98	1.88
	Diff.		-2.69						4.03							
	Total	314	53.79	16.42	1	60	0	947	61.03	17.99	7.24	6.61	1.03	1.76	6.21	6.7
	CR Value		-1.14						3.49							

Mean Achievement of Students-Categorywise



Mean Achievement of Students-Areawise



Environmental Studies

The data reveals that in rural areas achievement of Others was significantly better than SC students. In urban areas, there was no significant difference in achievement between SC and Others. In SC category, urban students performed significantly better than rural students whereas in Others category, rural students performed significantly better than urban students.

Mathematics

The data reveals that in rural areas achievement of Others was significantly better than SC students. In urban areas, there was no significant difference in achievement between SC and Others. In Others category, rural students performed significantly better than urban students.

Language

The data reveals that achievement of students, both from rural and urban areas of Others category was better than their counterparts in SC category. In Others category, rural students performed significantly better than urban students.

Grammar and Usage

Table 22 displays the areawise and categorywise achievement of students in Grammar and Usage and Reading Comprehension components of Language test.

Table 22: Areawise and Categorywise achievement of Class V Students

Subject	Area	SC			ST			Others (3)			Others vs SC		Others vs ST		ST vs SC	
		(1)			(2)						(3-1)		(3-2)		(2-1)	
		N	M	SD	N	M	SD	N	M	SD		CR		CR		CR
Grammar & Usage	Rural	260	56.6	18.43	0	0	0	497	67.48	19.69	10.88	7.53				
	Urban	54	58.44	16.89	1	72	0	450	62.6	17.47	4.16	1.7	-9.4	-11.41	13.56	5.9
	Diff.		-1.84						4.88							
	Total	314	56.92	18.16	1	72	0	947	65.16	18.82	8.24	6.9	-6.84	-11.18	15.08	14.71
	CR Value		-0.72						4.04							
Reading Comprehe nsion	Rural	260	47.87	19.06	0	0	0	497	55.41	22.62	7.54	4.84				
	Urban	54	51.98	19.74	1	40	0	450	52.79	19.4	0.81	0.29	12.79	13.99	-11.98	-4.46
	Diff.		-4.11						2.62							
	Total	314	48.58	19.21	1	40	0	947	54.16	21.18	5.58	4.35	14.16	20.57	-8.58	-7.91
	CR Value		-1.40						1.92							

The data reveals that in rural areas Others performed significantly better than SC students. In Others category, rural students performed significantly better than urban students.

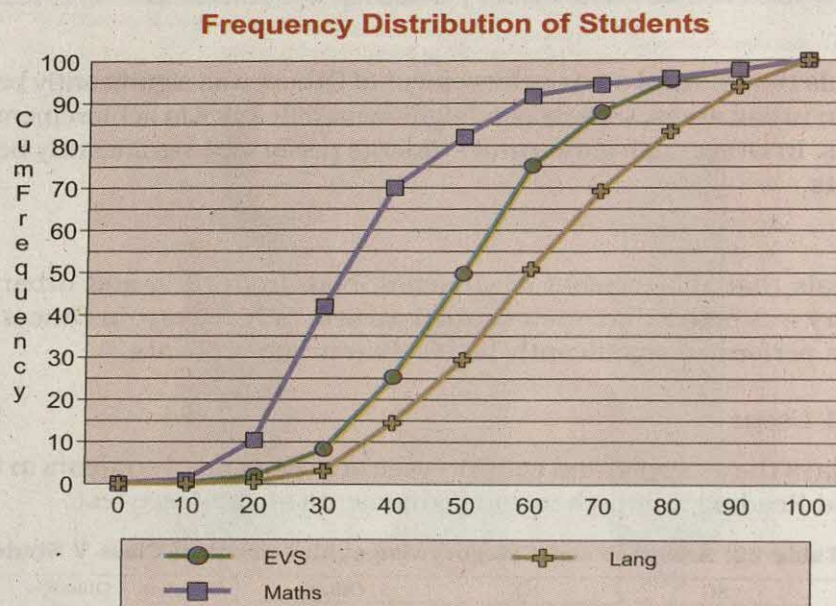
Reading Comprehension

The data reveals that in rural areas Others performed significantly better than SC students. Within categories, there was no significant difference in achievement between rural and urban students.

Distribution of Students in different Ability Ranges

Table 23: Distribution of Students of Class V on the basis of their Achievement Level

Subject		Achievement Level									
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
EVS	f	3	20	79	215	308	322	160	94	32	29
	cf	3	23	102	317	625	947	1107	1201	1233	1262
	cf(%)	0.24	1.82	8.08	25.12	49.52	75.05	87.72	95.17	97.70	100
Math	f	11	120	399	353	152	121	33	21	24	28
	cf	11	131	530	883	1035	1156	1189	1210	1234	1262
	cf(%)	0.87	10.38	41.97	69.97	82.01	91.60	94.22	95.88	97.78	100
Language	f	0	6	33	144	188	270	232	178	133	78
	cf	0	6	39	183	371	641	873	1051	1184	1262
	cf(%)	0	0.48	3.09	14.50	29.40	50.79	69.18	83.28	93.82	100



The data given in Table 23 reveals that in EVS and Mathematics the distribution of scores covered the entire range from 0-100 per cent. In Language, none of the students figured in the range 0-10 per cent. The maximum number of students in EVS (322), in Mathematics (399) and in Language (270) were in the range 50-60 per cent, 20-30 percent and 50-60 per cent, respectively. The 50.48% students in EVS, 17.99% in Mathematics and 70.60% in Language scored more than 50% marks whereas 24.95% in EVS, 8.40% in Mathematics and 49.21% in Language scored more than 60% marks.

Classification of Test Items

Test items were classified according to the range of facility values in Table 24 below:

Table 24: Distribution of Items according to Facility Values

Facility Value	Type of item	No. of Items		
		EVS	Lang.	Math
Less than 25	Very Difficult	4	0	6
25 to less than 50	Difficult	17	11	26
50 to less than 75	Average	15	22	6
75 to 100	Very Easy	4	7	0

No item in Language was found very difficult whereas 10% items from EVS and 16% items from Mathematics were found very difficult. Besides, majority of the items from each subject were found either difficult or average. But no items from Mathematics was found very easy.

Table 25: Distribution of Test Items according to DI

Range of D.I.	Type of item	EVS	Lang.	Math
0.70 to 1.00	Good Discrimination	0	0	0
.30 to less than .70	Average Discrimination	29	38	27
Less than .30	Poor Discrimination	11	2	11

72% items in EVS, 95% items in Language and 68% items Mathematics were found adequately discriminated. But 28% items in both EVS and Mathematics were found poorly discriminating.

The reliability of tests is as given below:

Table 26: Reliability Co-efficient of Tests

S. No.	Name of the test	No. of items	Reliability	
			Split half	K.R.-20
1	EVS	40	0.80	0.81
2	Mathematics	38	0.78	0.83
3	Language	40	0.77	0.85

The reliability Co-efficient for EVS, language and Mathematics is given above.

Impact of Intervening Variables

School Related Variables

Availability of competency-based teaching-learning material community participation ancillary facility and teaching time in the schools influence the learning achievement in Math and Language. The positive association of these variables with mathematics and language indicates that availability of teaching aids in various classes help the children in improving their learning achievement. By and large schooling facilities did not help the children in improving their learning skills in the three subjects.

Table 27: Regression and correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	97.064	--	98.791	--	95.054	--
PTR	-0.096	-0.056	-0.177	-0.073	-0.120	-0.076
Com_Participation	0.996	0.125	5.191*	0.324**	3.361*	0.227**
Teach-aid	0.014	0.013	0.344	0.085	0.0671	0.130
Physical facility	0.150	0.220	0.071	0.012	0.250	0.012
Ancillary facility	0.959	0.020	1.179*	0.057*	0.862	0.056
Instructional time	0.125	0.012	0.034	0.081	0.012*	0.067**
Working day	0.022	0.101	0.041	0.266	0.101	0.022
Index-Comp. TLM	3.878*	0.219*	3.302*	0.227*	1.359*	0.134*
R²	0.145		0.255		0.160	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explains 14.5% of total variance in EVS, 25.5% in Mathematics and 16.0% in Language.

Teacher Related Variables

Teaching aids and teaching style of teachers influence the learning achievement of children in the three subjects i.e., EVS, Mathematics and Language. The positive association of this variable with the three criteria indicates use of teaching aids i.e., teacher's guide, dictionary, reference book, maps, cards, charts, science and mathematics kits etc. helped the children in improving the learning skills in the three subjects.

Table 28: Regression and correlation Co-efficient of the Predictors of Teacher related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	50.576	--	33.477	--	62.159	--
Index-Qualification	0.284	0.078	0.169	0.037	0.096	0.056
Index-Experience	1.312	0.084	0.795	0.064	0.068	0.035
Index-Teaching Aid	6.224**	0.255**	11.563	0.376**	7.069**	0.283**
Index-School Org.	0.068	0.011	0.446	0.110	0.027	0.073
R²	0.076		0.156		0.090	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 7.6% of total variance in EVS, 15.6% in Mathematics and 9.0% in Language.

Pupil Related Variables

Percentage attendance of children in school, age of children and educational status and occupation of parents influence the learning achievement of children in EVS, Mathematics and Language. The positive association of percentage attendance of children and educational and occupation of parents with the three criteria indicates that these help the children in improving their learning achievement in the three subjects. The negative association of age of children with the three criteria indicates that children of higher age group score poorly in the three subjects, which is a universal phenomenon. Detention also proves detrimental to students.

Table 29: Regression and correlation Co-efficient of the Predictors of Pupil related variables with the Criteria

Predictors	EVS		Math		Language	
	B	r	B	r	B	r
Constant	73.352	--	67.884	--	81.487	--
Index-Ed & Occu	3.063**	0.013*	1.949*	0.081*	2.885**	0.120**
Index-Schooling	0.062	0.012	0.090	0.001	0.036	0.004
Index-TLP	0.569	0.001	0.470**	0.031	0.644	0.049
Age	-0.515*	-0.084**	-0.123*	-0.076**	-0.682	-0.084**
Detention	-0.857**	-0.197**	-0.780**	-0.141**	-0.746**	-0.198**
Attendance	0.320**	0.102**	0.335**	0.185**	0.322**	0.185**
R²	0.096		0.065		0.088	

*Significant at 0.05 level **Significant at 0.01 level

The predictors explain 9.6% of total variance in EVS, 6.5% in Mathematics and 8.8% in Language.

From the above analysis one can infer that availability of competency-based teaching aids in the school and use of teaching aids by the teachers help the children in improving their learning achievement in the three subjects. Further, attending school regularly by the children and education level of parents also help the children in improving their learning skills in the three subjects.

Hard Sport of Learning

In EVS, question number 9, 11, 12 and 28 were found very difficult and 17(45%) items were found difficult. The hard spots were found in almost all units.

In Mathematics, no item was found very difficult, whereas, 11(28%) items spots were: structure, comprehension of time table, informatical passage and story.

In Mathematics, 23, 25, 26, 27, 28 and 34 questions were found very difficult and 26(68%) items were found difficult. The hard spots were: number system, commercial mathematics, fraction, decimals, measurement/area and geometry.

FINDINGS

Analysis of the results signified that

- Musical instruments were available in approximately half of the schools.
- Computer was available in very few schools.
- Competency-based textbooks, teaching aids, workbooks were available in very few schools till year 2001.
- Average number of working days in schools was approximately 192.
- PTA was found in 86% schools.
- Percentage of female teachers was higher than male teachers in urban schools. The trend was reverse in rural schools.
- Average number of teachers per school in urban schools was higher than in rural schools.
- Teacher-pupil ratio was higher in urban schools than rural schools.
- Percentage of PG degree holder female teachers was more than male teachers.
- Not a single teacher was below Class X passed.
- More degree holder male teachers studied Mathematics, Language and Science than female teachers.
- Majority of teachers had diploma/certificate in primary/elementary education.
- Majority of teaching aids were available to more than 85% teachers.
- In general teaching aids were more available to female teachers than male teachers.
- Maximum in-service training programmes were conducted by DIET.
- No training programme was conducted by School Complex and Block Resource Centre.
- Maximum in-service training programmes were conducted on 'Content (ABT and Joyful Learning) Enrichment' and minimum on 'Use of Instructional Material' during last three years.
- The utility of knowledge gained and improvement in teaching-skills due to various training programmes were rated as 'High' by half of total sampled teachers.
- Approximately, 28% teachers have not attended any in-service training programme during last three years.
- More mothers were skilled worker and fathers were doing household work.
- In most of cases teachers were getting assistance always from 'Head of Schools'.
- For approximately 98% students, medium of instructions in the school was same as the Language spoken at home.
- Students were getting more academic assistance from elder brothers/sisters than other family members.
- Girls were getting more academic assistance from father than boys in rural areas.
- In general educational qualification of mothers was poorer than fathers.
- Approximately 88% students were attending schools above 70% working days.
- Approximately 4% students were attending schools below 60% of the total working days.
- Achievement of rural boys was better than rural girls across the subjects. No difference in achievement was there in urban area.
- Performance of rural students was better than their counterparts in urban areas.
- In EVS and Mathematics, there was no significant difference in students' achievement across the categories.
- In Language, performance of students of Others category was better than SC students.

- In urban areas, performance of students of Others category was better than SC students. 6% of students scored between 90-100% in Language only.
- Availability of competency based teaching aids in the school and used of teaching aids by the teachers help the children in improving their learning achievement in the three subjects.
- Attending school regularly by the children and educational level of parents also help the children in improving their learning skills in the three subjects.

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Appendix-I



TEST FORM

3

1

LANGUAGE ACHIEVEMENT TEST CLASS V

MEDIUM

1

3

To be filled in by the Student

Name of the Student _____	Roll No <table border="1"><tr><td></td><td></td></tr></table>		

To be filled in by the Investigator

Name	Code		
State.....	<table border="1"><tr><td></td><td></td></tr></table>		
District.....	<table border="1"><tr><td></td><td></td></tr></table>		
Block/Urban Area.....	<table border="1"><tr><td></td><td></td></tr></table>		
School.....	<table border="1"><tr><td></td><td></td></tr></table>		
Location of the School, 1- Rural 2- Urban	<table border="1"><tr><td></td><td></td></tr></table>		
Name of the Investigator.....	<table border="1"><tr><td></td><td></td></tr></table>		
Signature of the Investigator			

DEPARTMENT OF EDUCATIONAL MEASUREMENT & EVALUATION
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH & TRAINING
SRI AUROBINDO MARG, NEW DELHI-110016

2001

TEST FORM

3


1

LANGUAGE ACHIEVEMENT TEST

Time: 75 Minutes**Maximum Marks: 40****INSTRUCTIONS FOR STUDENTS** (To be explained by the Field Investigator)



1. This test booklet contains 40 questions.
2. Each question is of one mark.
3. All the questions are compulsory.

4. Answer the questions in the test booklet itself.

5. Answer the questions according to the instructions given before the questions by encircling the number of correct answer.
6. If by mistake you encircle the wrong answer and you wish to change it then put a cross  over the circle already drawn and then encircle another number which you think is the correct answer.

Direction: In the following questions two words are given for filling in the blank. One word is correct and one is wrong. Select the correct number and encircle it.

Example:

1. The _____ shines in the sky at night. 1. sun 2.  moon
2. We need to _____ after illness.  rest 2. work

Q.No.:1-13 Now, to fill the blanks in the following questions, encircle the correct word.

1. A car has four _____. 1. wheels 2. wheel
2. My little brother has just one _____. 1. teeth 2. tooth
3. The _____ has finished her work. 1. boy 2. girl

- | | | | |
|-----|---|---------------|---------------|
| 4. | The questions are not difficult. They are quite _____. | 1. easy | 2. common |
| 5. | No one informed me that you would be absent. Here 'informed' means | 1. asked | 2. told |
| 6. | She is a _____ girl. | 1. beautifull | 2. beautiful |
| 7. | The child was _____ on a mat. | 1. sitting | 2. siting |
| 8. | I like to watch cricket on _____. | 1. telivision | 2. television |
| 9. | My brother hasn't _____ money. | 1. many | 2. any |
| 10. | Wood _____ on water. | 1. floats | 2. swims |
| 11. | Rahul and Amit always wash _____ hands before eating. | 1. their | 2. our |
| 12. | Horses _____ very fast. | 1. runs | 2. run |
| 13. | He is interested _____ music. | 1. at | 2. in |

Direction: In the following sentences find out the part where there is a mistake. Then encircle its number.

Example: Many people / has / no food / to eat.

1 2 3 4

14-18. Now do the following questions.

14. That ship / carry goods / to Africa / every month.

1 2 3 4

15. The songs / of this / film / is very nice.

1 2 3 4

16. He loving / to read / stories and / watch T.V.

1 2 3 4

17. She is sitting / with her friend / at the / garden.

1 2 3 4

18. Yesterday, / I am / late / for office.

1 2 3 4

Directions: The following questions have four answers. Choose the correct answer and encircle its number.

Example: Which city is the capital of India?

1. Mumbai
2. Chennai
3. Delhi
4. Calcutta

19-20. In the following questions find out the correct meaning of the underlined words and make a circle on its number.

19. Children, please, first put down your name on the answersheet.

1. tell
2. write
3. explain
4. say

20. You have **to learn** this poem by heart.

1. memorize
2. study
3. practice
4. write

21-25. **Directions:** Where do you find the following signs? Select the correct answer and encircle its number.

21. No smoking

1. road
2. home
3. tree
4. bus

22. Don't walk on the grass

1. hospital
2. garden
3. home
4. hill

23. Beware of the dog

1. home
2. temple
3. ticket window
4. road

24. Don't spit

1. home
2. hospital
3. shop
4. garden

25. Beware of pick-pockets

1. school
2. shop
3. ticket window
4. power house

26-30. This is Rohit's school timetable. Use it to answer the questions given after it.

Periods Days	1	2	3	4	5	6	7
Monday	English	Hindi	Hindi	Science	Art	Maths	SUPW
Tuesday	Hindi	English	Social Studies	Art	Maths	Science	Physical Education
Wednesday	Social Studies	English	Hindi	Physical Education	Science	Maths	Library
Thursday	Science	Maths	Hindi	SUPW	English	Social Studies	Physical Education
Friday	Social Studies	Maths	Science	English	Art	Hindi	Physical Education

26. What does Rohit learn in the sixth period on Wednesday?
1. Maths
 2. Science
 3. Social Studies
 4. Hindi
27. On which day does Rohit go to Library?
1. Monday
 2. Tuesday
 3. Wednesday
 4. Thursday
28. Which subject does Rohit study for two periods together?
1. English
 2. Science
 3. Maths
 4. Hindi
29. Which subject does Rohit have most often in a week?
1. Hindi
 2. English
 3. Maths
 4. Social Studies
30. How many art classes does Rohit have in a week?
1. Two
 2. Three
 3. Four
 4. Five

31-35. Read the following passage carefully and answer the questions given below it. Encircle the number of the correct answer.

Passage

Millions of people in the world are blind. Formerly people thought that blind could not do anything. But now a days many blind schools have been opened. Here all facilities are available to the blind for studying. Now many blind students are earning their livelihood after studying or getting some training. Many blind people have become scholars in the world. Apart from this, the doctors are trying to prevent blindness among children through appropriate medical care and nutritious diet.

Today, many people donate their eyes. After their death, their eyes are transplanted in the blind people's eyes. Thus many blind persons are able to see.

31. Why do many people donate their eyes?
1. their eyes are weak
 2. blind people can become scholars
 3. their eyes will enable a blind to see
 4. they want to become famous
32. The blindness not needed can be removed through
1. nutritious diet
 2. eye transplant
 3. higher education
 4. some training
33. The blind can become scholars by
1. taking nutritious diet
 2. getting back their eyesight
 3. eye transplant
 4. studying hard

34. What can a doctor do to prevent blindness?

1. provide medical care
2. train blind people
3. provide nutritious diet
4. turn the blinds into scholars

35. What did people think about blinds formerly?

1. there is no cure for blindness
2. blind can get training
3. blind cannot do anything
4. blind can donate their eyes

36-40. Read the following passage and answer the questions given below it.

Encircle the number of the correct answer.

Passage

Mohan was an orphan. He lived under a big tree beside a river. He played in the shadow and ate the fruit of the tree. When Mohan grew up, he cut some thick branches of the tree and made a boat for himself. He took the people across the river in his boat. Thus, he earned a lot of money. Now he thought of making a house for himself. He again cut some more branches and made a house. Mohan lived happily in his house, but the tree started dying. There was nobody to take care of it. One night there was a heavy storm. In that storm Mohan's house and the boat both got broken and flew away with the wind. Mohan again started living under the same tree. But the tree had neither the shadow nor the fruit. Now Mohan realized if he had looked after the tree he would have both the shadow and the wood. And with that he could start his life again.

36. What is this story about?

1. a tree
2. a boat
3. a boy
4. a storm

37. What did Mohan do to earn his living?
1. made a house
 2. made a boat
 3. looked after the tree
 4. ate the fruit of the tree
38. What did the tree give to Mohan for living comfortably?
1. shadow
 2. cool air
 3. the bank
 4. wood
39. What mistake did Mohan make?
1. cut the branches of the tree
 2. made a house for himself
 3. didn't look after the tree
 4. didn't care for his boat
40. What do you learn from this story?
1. we should take care of the trees
 2. we should not make a wooden house
 3. we should not cut the branches of a tree
 4. we should not make a boat



TEST FORM

2

1

MATHEMATICS ACHIEVEMENT TEST CLASS V

MEDIUM

1

3

To be filled in by the Student

Name of the Student _____	Roll No
	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>

To be filled in by the Investigator

Name	Code
State.....	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
District.....	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
Block/Urban Area.....	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
School.....	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
Location of the School, 1- Rural 2- Urban	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
Name of the Investigator.....	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> <div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>
Signature of the Investigator	

DEPARTMENT OF EDUCATIONAL MEASUREMENT & EVALUATION
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH & TRAINING

SRI AUROBINDO MARG, NEW DELHI-110016

TEST FORM


2 1

MATHEMATICS ACHIEVEMENT TEST

Time: 75 Minutes

Maximum Marks: 40

INSTRUCTIONS FOR STUDENTS: (To be explained by the field investigator)

1. The test booklet contains 40 questions.
2. Each question is of one mark.
3. All the questions are compulsory.
4. **Answer the questions in the test booklet itself.**
5. For every question four probable answers bearing numbers 1,2,3 and 4 are given. Only one out of four is the correct answer. Choose the correct answer and encircle the appropriate number as explained in the example.
6. If by mistake you encircle the wrong answer and you wish to change it then put a cross  over the circle already drawn and then encircle another number which you think is the correct answer.
7. Do rough work on the right side in the test booklet.

Directions:

Given below are 40 multiple choice questions. Read each question along with the alternatives carefully. To answer the question, find out the correct answer from amongst given alternatives and encircle its S.No. as has been explained in the following practice example.

Example: The product of 0.2 and 0.3 is

- | | |
|-------------------------------------|------|
| 1. | 0.5 |
| 2. | 0.6 |
| <input checked="" type="radio"/> 3. | 0.06 |
| 4. | 0.23 |

In this question, the product of 0.2 and 0.3 is 0.06 which has been given as alternative at S.No. 3. Hence alternative 3 has been encircled.

NOW YOU CAN START

1. The number name of 28 00 845 is
 1. two lakh eighty thousand eight hundred forty five
 2. twenty eight lakh eight hundred forty five
 3. two lakh eight hundred thousand forty five
 4. twenty eight thousand eight hundred forty five.
2. The place value of five in the number 6 85 300 is
 1. five
 2. fifty
 3. five thousand
 4. five lakh
3. Which set of numbers given below is in ascending (increasing) order?
 1. 8 15 310 5 31 840 1 85 340
 2. 1 90 099 9 10 099 9 19 910
 3. 5 84 566 8 54 566 6 65 458
 4. 7 16 345 7 13 654 1 76 345
4. Which one of the following is true?
 1. 99 898 comes before 99 989
 2. 54 530 lies between 54 003 and 54 500
 3. 1 000 00 comes before 99 999
 4. 1000 comes after 1001
5. Which one of the following is true?
 1. 90 990 < 90 909
 2. One crore = 1 00 00 000
 3. 99 999 > 1 00 000
 4. Ten lakh = One hundred thousands
6. The Highest Common Factor (HCF) of 42 and 56 is
 1. 7
 2. 14
 3. 42
 4. 56

7. The Lowest Common Multiple (LCM) of 4, 8 and 16 is
1. 2
 2. 4
 3. 8
 4. 16
8. The sum of 23 587 and 2 612 is
1. 25 199
 2. 26 199
 3. 36 197
 4. 49 707
9. The difference between 9 39 852 and 43 234 is
1. 5 07 512
 2. 8 96 618
 3. 8 96 628
 4. 9 83 086
10. The product of 353 and 316 is
1. 669
 2. 1 00 548
 3. 1 11 548
 4. 3 53 316
11. The remainder of $4316 \div 17$ is
1. 15
 2. 17
 3. 253
 4. 4 316
12. How many plants are there in a garden, which has 16 rows, and each row has 50 plants?
1. 80
 2. 800
 3. 1 650
 4. 5 016

13. The cost of one dozen pens is Rs 24. What is the cost of five pens?
1. Rs 10
 2. Rs 24
 3. Rs 36
 4. Rs 120
14. The number of students in classes I to V in a school are 32, 35, 31, 32 and 30 respectively. The average strength of a class in the school is
1. 30
 2. 31
 3. 32
 4. 35
15. The rainfall in a town in five consecutive months was recorded as 2 cm, 5 cm, 11 cm, 8 cm and 4 cm respectively. The average rainfall in the town was
1. 2 cm
 2. 5 cm
 3. 6 cm
 4. 11 cm
16. Ten goats were purchased at the rate of Rs.1500 per goat and all these goats were sold for Rs 16 000. The net profit or loss was
1. loss Rs 1500
 2. profit Rs 1500
 3. loss Rs 1000
 4. profit Rs 1000
17. In a right angled triangle the number of acute angles are
1. one
 2. two
 3. three
 4. none

18. What is the interest on Rs 500 for two years at the rate of 5% per annum?
1. Rs 10
 2. Rs 25
 3. Rs 50
 4. Rs 150
19. A farmer produced 35.50 quintals, 13.275 quintals and 42.60 quintals of food grains in his three fields. How many quintals of food grains did he produce?
1. 91.0375
 2. 91.375
 3. 209.860
 4. 913.75
20. Five jugs full of water are required to fill up a bucket. If a tank needs 15 bucket full of water to fill it up, total jugs of water required to fill up the tank are
1. 15
 2. 20
 3. 50
 4. 75
21. The area of a rectangular floor with sides 12 m and 8 m is
1. 20 sq m
 2. 40 sq m
 3. 96 sq m
 4. 128 sq m
22. A train leaves Ramnagar at 3.00 p.m. and reaches Karimnagar at 9.00 a.m. next day. The time taken by the train in the journey is
1. 6 hrs
 2. 9 hrs
 3. 12 hrs
 4. 18 hrs

23. Which set of the following fractions is in descending (decreasing) order?

1. $\frac{1}{2}, \frac{3}{4}, \frac{2}{5}$

2. $\frac{3}{4}, \frac{2}{5}, \frac{1}{2}$

3. $\frac{3}{4}, \frac{1}{2}, \frac{2}{5}$

4. $\frac{1}{2}, \frac{2}{5}, \frac{3}{4}$

24. Which one of the following represents $\frac{85}{25}$ in its lowest term?

1. $\frac{17}{5}$

2. $\frac{19}{5}$

3. $\frac{22}{5}$

4. $\frac{36}{5}$

25. The value of $1\frac{1}{3} + \frac{3}{4} - \frac{5}{6}$ is

1. $1\frac{1}{4}$

2. $1\frac{1}{2}$

3. $1\frac{5}{7}$

4. $2\frac{1}{4}$

26. Ram spends $\frac{1}{2}$ of his salary in paying fee, $\frac{1}{5}$ of it in paying house rent and $\frac{3}{10}$ of it in purchasing grocery. In which item does he spend the list?

1. Paying house rent
2. Paying fees
3. Purchasing grocery
4. Equal in all the three

27. The value of $1\frac{3}{5} + 1\frac{5}{7}$ is
1. $\frac{21}{25}$
 2. $\frac{10}{7}$
 3. $\frac{96}{36}$
 4. $\frac{14}{15}$
28. What is the difference between 500.2 and 499.101?
1. 1.099
 2. 1.101
 3. 1.109
 4. 1.99
29. Which one of the following is correct?
1. 0.05 l = 5 ml
 2. 35 cm = 3500 mm
 3. 56.7 kg = 5670 g
 4. 0.036 km = 36 m
30. How much money does Mohan get by selling 24.63 kg of old newspapers at the rate of Rs 3 per kg?
1. Rs 72.89
 2. Rs 73.89
 3. Rs 728.90
 4. Rs 738.90
31. How many strips of length 30 cm each can be cut out of 6 m long strip?
1. 6
 2. 14
 3. 18
 4. 20

32. Which one of the following is correct?
1. $20\% = 0.22$
 2. $\frac{1}{5} = 0.02$
 3. $0.3 = \frac{1}{3}$
 4. $25\% = \frac{1}{4}$
33. 16% of 312 is
1. 19.50
 2. 49.92
 3. 195
 4. 296
34. A man saves Rs 125 from his salary of Rs 2500 per month what percent of his salary does he save every month?
1. 5
 2. 6
 3. 10
 4. 20
35. The value of the expression $12 - 8 \div 4 + 3 \times 2$ is
1. 8
 2. 10
 3. 16
 4. 26
36. The difference between 3 and $\frac{1}{6}$ is
1. $\frac{1}{2}$
 2. $\frac{1}{3}$
 3. $\frac{17}{6}$
 4. $\frac{19}{6}$

37. 12 605 rounded to the nearest thousand gives

1. 12 000
2. 12 600
3. 12 610
4. 13 000

38. Scalene triangle has

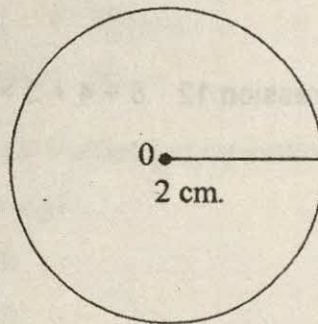
1. two sides equal
2. all sides equal
3. all sides different
4. two angles equal

39. The area of a square with side 6 cm is

1. 6 sq cm
2. 12 sq cm
3. 24 sq cm
4. 36 sq cm

40. The diameter of the circle given below is

1. 2 cm
2. 4 cm
3. 5 cm
4. 6 cm





TEST FORM

1

1

ENVIRONMENTAL STUDIES ACHIEVEMENT TEST CLASS V

MEDIUM

1

3

To be filled in by the Student

Name of the Student _____

Roll No

--	--

To be filled in by the Investigator

Name	Code		
State.....	<table border="1"><tr><td></td><td></td></tr></table>		
District.....	<table border="1"><tr><td></td><td></td></tr></table>		
Block/Urban Area.....	<table border="1"><tr><td></td><td></td></tr></table>		
School.....	<table border="1"><tr><td></td><td></td></tr></table>		
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Name of the Investigator.....	<table border="1"><tr><td></td><td></td></tr></table>		
Signature of the Investigator			

**DEPARTMENT OF EDUCATIONAL MEASUREMENT & EVALUATION
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SRI AUROBINDO MARG, NEW DELHI-110016**

TEST FORM


1 1

EVS ACHIEVEMENT TEST

Time: 75 Minutes

Maximum Marks: 40

INSTRUCTIONS FOR STUDENTS: (To be explained by the field investigator)

1. The test booklet contains 40 questions.
2. Each question is of one mark.
3. All the questions are compulsory.
4. **Answer the questions in the test booklet itself.**
5. For every question four probable answers bearing numbers 1,2,3 and 4 are given. Only one out of four is the correct answer. Choose the correct answer and encircle the appropriate number as explained in the example.
6. If by mistake you encircle the wrong answer and you wish to change it then put a cross  over the circle already drawn and then encircle another number which you think is the correct answer.

Example: The name of the capital of India is

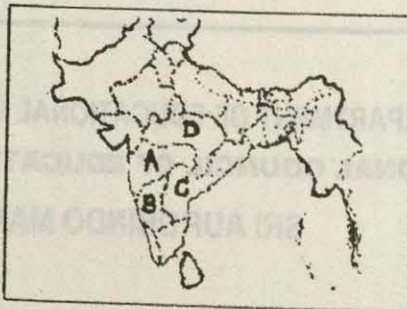
1. Mumbai
2. Kolkata
3. Chennai
- ☒ 4. Delhi

Ans. Delhi is the correct answer. Therefore a circle is drawn around alternative No.4.

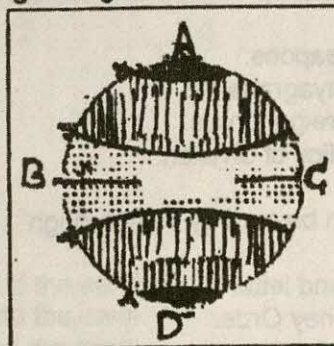
Direction: In this way you answer all questions by drawing a circle around the correct number of the answer.

1. Which letter shows the state of Maharashtra in the given map?

1. A
2. B
3. C
4. D



2. In which part of India the largest plateau is located?
1. West
 2. North
 3. South
 4. East
3. What type of climate is found at the places located at high altitude?
1. High rainfall
 2. Low rainfall
 3. Very hot
 4. Very cold
4. Which state of India make international boundaries with Nepal and Bhutan?
1. Sikkim
 2. West Bengal
 3. Bihar
 4. Arunachal Pradesh
5. The state which is fully located in Himalayan region is
1. Punjab
 2. Uttar Pradesh
 3. Jammu & Kashmir
 4. Haryana
6. The correct position of a place on the globe can be found by knowing
1. distance from equator
 2. longitude of the place
 3. latitude of the place
 4. both latitude and longitude
7. Which letter shows the North pole in the given figure ?
1. A
 2. B
 3. C
 4. D
8. A legislator is elected for a period of
1. 3 years
 2. 4 years
 3. 5 years
 4. 6 years



9. Which of the following represents the President in a State?
1. Chief Minister
 2. Governor
 3. Speaker
 4. Chief Justice of High Court
10. The case decided by the district court can be sent for APPEAL to
1. High Court
 2. Supreme Court
 3. Governor
 4. President

11. The picture of the first president of independent India is



1

2

3

4

12. How many tier-systems are followed for governance in our country?

1. Three
2. Four
3. Five
4. Six

13. The minimum age needed to cast a vote is

1. 17 years.
2. 18 years.
3. 21 years.
4. 25 years.

14. What did Gandhiji use to make our country free from the British rule?

1. Weapons.
2. Satyagraha.
3. Foreign forces.
4. Policy of division.

15. Articles can be sent by post through

1. Inland letter
2. Money Order
3. Postcard
4. Parcel

16. United Nations day is celebrated on
1. 5th September
 2. 14th November
 3. 24th October
 4. 25th December
17. The problems of unemployment and housing in India are mainly because of
1. Information-explosion.
 2. Technology-explosion.
 3. Knowledge-explosion.
 4. Population - explosion.
18. During the freedom struggle, the person accepted as the farmer's leader was
1. Dr. Rajendra Prasad
 2. Mahatma Gandhi
 3. Vallabh Bhai Patel
 4. Pt. Jawahar Lal Nehru
19. India was ruled just before British by
1. Marathas
 2. Rajputs
 3. Sikhs
 4. Mughals
20. Who gave the slogan 'Jai Hind'?



1



2



3



4

21. The planet nearest to the earth is
1. Mercury
 2. Saturn
 3. Jupiter
 4. Mars
22. Lunar eclipse occurs when

1. the sun is between the moon and the earth.
2. the moon is between the sun and the earth.
3. the earth is between the sun and the moon.
4. any other planet is between the sun and the moon.

23. The constituents of air around green fields are

1. oxygen, nitrogen, carbon monoxide.
2. nitrogen, carbon dioxide, oxygen.
3. carbon monoxide, oxygen, hydrogen
4. sulphurdioxide, nitrogen, oxygen.

24. Approximately $\frac{1}{5}$ th of the volume of the fresh air is

1. Hydrogen
2. Nitrogen
3. Carbondioxide
4. Oxygen

25. We feel uncomfortable during the summer season because

1. we drink more water.
2. our body perspires less.
3. there is less air in the atmosphere.
4. our body perspires more.

26. Which one of the following is pollution free fuel?

1. Coal
2. Biogas
3. Petrol
4. Kerosene oil

27. Soil erosion means

1. increase in soil fertility.
2. conservation of minerals in the soil.
3. planting of more trees.
4. carrying away top soil by water.

28. What would happen if the forests are destroyed?

1. There will be less rain.
2. There will be more fresh air.
3. Soil erosion will not occur.
4. Nothing will change

29. Which one of the following is a simple machine ?

1. Bicycle
2. Washing Machine
3. Forceps
4. Sewing Machine

30. Which one of the following will float on the surface of water?
1. Mercury
 2. Iron rod
 3. Wooden block
 4. Stone
31. The direction of a moving object can be changed by
1. increasing friction
 2. reducing friction
 3. applying force
 4. changing shape
32. Which one of the following motions is only due to gravity ?
1. A train going up to a hill station.
 2. A train coming down a hill station.
 3. A mango falling freely from a tree.
 4. A football rolling on a plain ground.
33. If there is a cholera patient in your family and doctor is not available, then you should go to a
1. health worker
 2. quack
 3. social worker
 4. priest
34. Some children find it difficult to see in a dim light and may have white triangular patches on the white portion of the eye. Which food stuff should be taken in plenty to cure this disease?
1. Orange, lemon and sprouted pulses.
 2. Butter, sprouted gram and ground nut.
 3. Pulses, potatoes and whole grain.
 4. Green leafy vegetables, papaya and milk.
35. Which of the following plants grow naturally in the desert?
1. Lotus
 2. Cactus
 3. Marigold
 4. Deodar
36. Which part of our body is protected by the backbone ?
1. Spinal cord
 2. Lungs
 3. Intestines
 4. Heart

37. If the tail fin of a fish is tied with a rubber band, it will not be able to
1. digest food.
 2. lay eggs.
 3. breathe.
 4. swim around.
38. Project 'Tiger' was started to
1. protect forests.
 2. finish other wild animals.
 3. save domestic animals from tigers.
 4. protect tigers from extinction.
39. While cooking food in the kitchen, it is safer to wear
1. woolen clothes.
 2. nylon clothes.
 3. terricot clothes.
 4. cotton clothes.
40. Which disease is spread by flies?
1. Pneumonia.
 2. Diarrhoea
 3. Ricket
 4. Malaria
41. Which of the following plants grow naturally in the desert?
1. Lotus
 2. Cactus
 3. Mango
 4. Coconut
42. Which part of our body is protected by the backbone?
1. Spine cord
 2. Lungs
 3. Stomach
 4. Heart
43. There is a chlorea patient in the family. What should you do?
1. A bath going up and down.
 2. A bath coming down and up.
 3. A mango falling early for a week.
 4. A football rolling on a plain ground.
44. Which one of the following is not a fruit?
1. Increasing friction
 2. Reducing friction
 3. Applying force
 4. Changing shape
45. The direction of a moving object can be changed by
1. Increasing friction
 2. Reducing friction
 3. Applying force
 4. Changing shape
46. Some children find it difficult to see in a dark room. They may have
1. Orange, lemon and squeezed orange
 2. Butter, sprouted gram and ground nut
 3. Beans, potatoes and whole grain
 4. Green leafy vegetables, grapes and milk
47. Which of the following plants grow naturally in the desert?
1. Lotus
 2. Cactus
 3. Mango
 4. Coconut
48. Which part of our body is protected by the backbone?
1. Spine cord
 2. Lungs
 3. Stomach
 4. Heart

MONITORING LEARNING ACHIEVEMENT

SCHOOL QUESTIONNAIRE

SQ 1

Rural : 1 ☐
Urban: 2 ☐State Code District Code Block Code School Code

A. CLASSIFICATORY DATA

- (a) Name of the State : _____
- (b) Name of the District : _____
- (c) Name of Village/
Municipal Town/
City : _____
- (d) Name of School : _____

B. PARTICULARS OF FIELD OPERATIONS

- (a) Name of Field Investigator _____
- (a1) Code Number
- (a2) Date of Survey From _____ To _____

Signature _____

- (b) Name of District Coordinator _____
- (b1) Date of Receipt _____
- (b2) Date of Scrutiny _____

Signature _____

Remarks: _____



General Instruction

1. If prior information is passed to the Head Master of the school to keep the following records ready, it would facilitate the filling up of the school information questionnaire
 - (i) Incentive scheme register
 - (ii) Community participation record
 - (iii) Operation Black Board Scheme register
 - (iv) Students attendance register
 - (v) Teacher attendance register
2. To enter all codes in their appropriate boxes
3. School information questionnaire may be handed over the headmaster for facilitating the organizing the information. However, other tools are not to be given to anyone for the sake of confidentiality.
4. Fill your code number, sign the questionnaire. The coordinator must also sign it after checking it.

C. GENERAL INFORMATION ABOUT SCHOOL

IMPORTANT NOTE: BY MEANS OF THIS SCHEDULE, WE ARE SEEKING DETAILED INFORMATION REGARDING THE SCHOOL. IF FOR SOME REASON, INFORMATION SOUGHT IS ABSOLUTELY NOT AVAILABLE, USE THE NON RESPONSE CODE '9' TO FILL UP THE BOXES. THE CODE '0' IS TO BE USED STRICTLY TO INDICATE 'NOT APPLICABLE'.

- 1 School managed by (1 - 3)
- 1: State Government
2: Zila Parishad/Panchayat
3: Local body/Municipal Committee/
Urban Local Body
- 2 Is preschool attached to your school? (1 - 2)
- 1: Yes 2: No
3. (a) Indicate upto what class is your school?
- (b) From which class English is introduced as a subject in your school
4. Whether the school has been inspected this year 1: Yes 2: No

D. TEACHERS

5. Teachers teaching Primary classes on roll as on the day of Survey:

On Roll (Including Head Teacher)			No. of Students per Teacher in Primary Classes
Male	Female	Total	
<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>

E. INSTRUCTIONAL TIME (for current academic year)

6. Number of working days scheduled for the current year
7. Number of periods per day
8. Duration of a period in minutes

F. SCHOOL FACILITIES

9.	Is the school covered by Operation Black Board (OB)?	1: Yes	2: No	<input type="checkbox"/>
10.	Is the school covered by DPEP Scheme?	1: Yes	2: No	<input type="checkbox"/>
11.	State whether you have the following:	Yes	No	
1.	Maps	1	2	<input type="checkbox"/>
2.	Globe	1	2	<input type="checkbox"/>
3.	Charts (Health, Social Studies, Language etc.)	1	2	<input type="checkbox"/>
4.	Play material & Toys	1	2	<input type="checkbox"/>
5.	Games equipment	1	2	<input type="checkbox"/>
6.	Primary Science Kit	1	2	<input type="checkbox"/>
7.	Mini Tool Kit	1	2	<input type="checkbox"/>
8.	Mathematics Kit	1	2	<input type="checkbox"/>
9.	Books for Library	1	2	<input type="checkbox"/>
	a) reference books, dictionaries, encyclopaedia	1	2	<input type="checkbox"/>
	b) children's book	1	2	<input type="checkbox"/>
	c) magazines, journals, newspapers	1	2	<input type="checkbox"/>
10.	School bell	1	2	<input type="checkbox"/>
11.	Musical instruments	1	2	<input type="checkbox"/>
12.	Mats and furniture for students (1. For all, 2. Some, 3. None) (1 - 3)			<input type="checkbox"/>
13.	Chairs for teachers	1	2	<input type="checkbox"/>
14.	Tables for teachers	1	2	<input type="checkbox"/>
15.	Blackboard	1	2	<input type="checkbox"/>
16.	Pin-up board/Notice board	1	2	<input type="checkbox"/>

		Yes	No	
17.	Chalk and duster	1	2	<input type="checkbox"/>
18.	Water pitcher, ladle, glasses	1	2	<input type="checkbox"/>
19.	Dust-bin	1	2	<input type="checkbox"/>
20.	Safe drinking water	1	2	<input type="checkbox"/>
21.	Toilet facilities	1	2	<input type="checkbox"/>
22.	Separate toilet facilities for girls	1	2	<input type="checkbox"/>
23.	Electric connection for the school	1	2	<input type="checkbox"/>
24.	T.V.	1	2	<input type="checkbox"/>
25.	Computer	1	2	<input type="checkbox"/>
26.	Playground facilities	1	2	<input type="checkbox"/>
27.	Annual medical check up for children	1	2	<input type="checkbox"/>
28.	Immunization facility	1	2	<input type="checkbox"/>
29.	First aid kit	1	2	<input type="checkbox"/>

G STUDENT INCENTIVE SCHEMES

12. Number of Children receiving the facilities under incentive schemes

[illegible]

13. Availability of competency based teaching-learning material (write 1 for availability, '2' Non Availability) and for the year of availability. If not available mention year as '0000'

Class	Textbook	Workbook	Teacher's Handbook	Teaching Aids
	Avai. Year	Avai. Year	Avai. Year	Avai. Year
I	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
II	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
III	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
IV	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
V	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

H. COMMUNITY PARTICIPATION IN EDUCATION

Do you have		Yes	No	
14.	Village Education Committee in your village	1	2	<input type="checkbox"/>
15.	Area Education Committee	1	2	<input type="checkbox"/>
16.	School Management Committee	1	2	<input type="checkbox"/>
17.	PTA for your School	1	2	<input type="checkbox"/>



Department of Educational Measurement & Evaluation
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING
St. Aurobindo Marg, New Delhi 110 016

MONITORING LEARNING ACHIEVEMENT

TEACHER QUESTIONNAIRE

TQ 2

Rural : 1 ☐
Urban : 2 ☐

State Code District Code Block Code School Code Teacher Code

A. CLASSIFICATORY DATA

- (a) Name of the State : _____
- (b) Name of the District : _____
- (c) Name of Village/
Municipal Town/
City : _____
- (d) Name of School : _____

B. PARTICULARS OF FIELD OPERATIONS

- (a) Name of Field Investigator _____
- (a1) Code Number
- (a2) Date of Survey From _____ To _____

Signature _____

(b) Name of District Coordinator _____

(b1) Date of Receipt _____

(b2) Date of Scrutiny _____

Signature _____

Remarks: _____



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Important Instructions for filling up Teacher's Schedule

1. At the most 3 teachers who are teaching sampled students of Class V will be interviewed.
2. The teachers are to be interviewed singly and not in a group.
3. The code for the Teachers will be as follows:

(a)	Teacher who is teaching class V Mathematics only	01
(b)	Teacher who is teaching class V Language only	02
(c)	Teacher who is teaching class V EVS only	03
(d)	Teacher who is teaching class V Maths & Language	04
(e)	Teacher who is teaching class V Maths and EVS	05
(f)	Teacher who is teaching class V Language and EVS	06
(g)	Teacher who is teaching class V all the subject (Maths, Language and EVS)	07
4. All boxes must be filled with codes by a Field Investigator. It should also be signed by District Co-ordinator.

C. RESPONDENT DETAILS

		Codes for Selection	Enter the selected code
1. Sex:	1: Male 2: Female	(1 - 2)	<input type="checkbox"/>
2. Category:	1. S.C. 2. S.T. 3. O.B.C. 4. Others	(1 - 4)	<input type="checkbox"/>
3. Highest Educational Qualification:	1: Middle 2: Secondary 3: Higher /Senior Secondary 4: Graduation 5: Post-graduation	(1 - 5)	<input type="checkbox"/>
4. Teacher studied Mathematics upto	1: Middle 2: Secondary 3: Higher/Senior Secondary 4: Degree level	(1 - 4)	<input type="checkbox"/>
5. Teacher studied Language (being tested) upto	1: Middle 2: Secondary 3: Higher/Senior Secondary 4: Degree level	(1 - 4)	<input type="checkbox"/>
6. Teacher studied Science upto	1: Middle 2: Secondary 3: Higher/Senior Secondary 4: Degree level	(1 - 4)	<input type="checkbox"/>
7. Teacher studied Social Science upto	1: Middle 2: Secondary 3: Higher/Senior Secondary 4: Degree level	(1 - 4)	<input type="checkbox"/>
8. Professional Qualifications:		Yes No	
1: Primary/Elementary Teaching Certificate/Diploma		1 2	<input type="checkbox"/>
2: Graduate Training (B.Ed. or equivalent)		1 2	<input type="checkbox"/>
3: M.Ed. and above		1 2	<input type="checkbox"/>

D. TEACHING EXPERIENCE AND TRAINING

9. Total teaching experience of Primary classes (in years)

10. What is your employment status in this school?
(Adhoc, Temp., permanent etc.) (1 - 4)

- 1: Regular full time
- 2: Against leave vacancy
- 3: Temporary
- 4: Others (Specify _____)

11. In-service training during the last three years starting from the most recent one (Put '00' or '0' for 'Not Applicable')

USE THE CODES GIVEN BELOW to complete the table

Theme/Subject codes

- 1: General Training Programme
- 2: Content enrichment
- 3: Production of instructional material
- 4: Use of instructional material
- 5: Assessment of pupil learning
- 6: Competency Based Teaching-Learning
- 7: Activity Based Joyful Learning
- 8: Other (Specify _____)

Codes for 'who provided training'

- 1: School Complex
- 2: Block Resource Centre
- 3: Teacher Resource Centre
- 4: Cluster Resource Centre
- 5: DIET
- 6: SCERT
- 7: Any other (Specify _____)

S.No.	Year of Training	Number of Days	Theme/ Subject (1-8)	Who provided Training (1-7)
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

12. The extent of the utility of the knowledge gained through the training programmes for your classroom practice: (1-3)

1: High 2: Average 3: Low

13. The extent of the impact of training programmes in improving your:

1: High 2: Average 3: Low

(a) Language Teaching Skills

(1 - 3)

(b) Mathematics Teaching Skills

(1 - 3)

(c) EVS Teaching Skills

(1 - 3)

14. Which subjects do you teach (Put '0' for Not Applicable)

Yes No

1. Language

1 2

2. Mathematics

1 2

3. Environmental Studies

1 2

4. Science

1 2

5. Social Science/Studies

1 2

6. Other (Specify _____)

1 2

E. TEACHING AIDS AND TEACHING STYLE**15. Availability of teaching facilities and the extent of their use:**

Facility	Whether Available		Extent of use	
	(1: Yes)	2: No)	(1: Regularly	2: Sometimes
1. Teacher's guides	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Dictionary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Books other than textbooks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Maps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Globe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Charts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Flash Cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Science Kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Mathematics Kit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Other (Specify _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Do you give homework to children?

(1 - 3)

☐

- 1: Regularly
 2: Sometimes
 3: Not at all

17. How much home work do you give (for one day?)

1. In Language, state number of pages:
 2. In Mathematics, state number of questions:
 3. In EVS, state number of questions

18. Whether Teacher's Diary/Mannual is maintained

(1: Yes 2: No)

☐

F. SCHOOL ORGANISATION

19. Please indicate how much help you get from the following people to improve your skills?
(USE THE FOLLOWING CODES)

0: Not Applicable 1: Always 2: Sometime 3: Never

(0 - 3)

1. Head of Institutions

☐

2. Other teachers of the school

☐

3. Cluster Resource Coordinator

☐

4. Block Resource Coordinator

☐

5. Block Education Officer/DEO/AIOS

☐

6. DIET Faculty

☐

MONITORING LEARNING ACHIEVEMENT

PQ 3

PUPIL QUESTIONNAIRE

Rural : 1 ☐
Urban: 2 ☐

State Code District Code Block Code School Code Student code

A. CLASSIFICATORY DATA

- (a) Name of the State : _____
- (b) Name of the District : _____
- (c) Name of Village/
Municipal Town/
City : _____
- (d) Name of School : _____

B. PARTICULARS OF FIELD OPERATIONS

- (a) Name of Field Investigator _____
- (a1) Code Number
- (a2) Date of Survey From _____ To _____

Signature _____

- (b) Name of District Coordinator _____
- (b1) Date of Receipt _____
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Signature _____

Remarks: _____



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Important Instructions for filling up Student Schedule (Present)

1. Write legibly the name of the student on the top right hand corner of the schedule in English block letters only.
2. Enter the relevant State code, District code, Block, code, School code and Student code.
3. For Student Schedule, the student ID code number must match the Mathematics and Language Test Student ID codes of the respective students.
4. Maximum 30 Pupil Questionnaires are to be filled for Class V through the interview method.
5. Do not leave any question blank. Enter the most applicable code.
6. When you ask the questions, ask it correctly so that the respondent understands what you want.
7. If you have made a mistake cross-out the box and draw them again next to the original boxes and enter the answer.
8. If you have forgotten to record an answer enter 9 . If the child does not know the answer or refuses to answer enter 7 .
9. Fill your code number, sign the schedule and the supervisors must sign it after checking the questionnaire.

C. RESPONDENT DETAILS

1. Name : _____

2. Father's Name: _____

3. Gender : 1. Boy 2. Girl

☐

4. Age (in completed years):

--	--

5. Category

1: SC

2: ST

3: OBC

4: Others

(1 - 4)

☐6. Is the language used at home same as
medium of instruction in the school?

1: Yes 2: No

☐**D. EDUCATIONAL STATUS OF HOUSEHOLD MEMBERS**

7. Write the EDUCATIONAL STATUS of the members given in the table using the codes given below. For siblings, start with the oldest sibling and go to next child in descending order of age. Do not enter for siblings below five years of age or those who have not started attending school. Details of only up to 6 siblings may be recorded. Put '0' for 'Not Applicable'.

CODE FOR EDUCATIONAL STATUS

1: Illiterate

2: Literate (no formal schooling but can read and/or write)

3: Primary (classes 1 to 4/5)

4: Secondary (Classes 5/6 to 10)

5: Higher/Senior Secondary (Classes 11 to 12)

6: Degree and above

7: Do not know/can not say

	Sex 1: Male 2: Female	Educational Status Code (1 - 7)
Father		<input type="text"/>
Mother		<input type="text"/>
Sibling 1	<input type="text"/>	<input type="text"/>
Sibling 2	<input type="text"/>	<input type="text"/>
Sibling 3	<input type="text"/>	<input type="text"/>
Sibling 4	<input type="text"/>	<input type="text"/>
Sibling 5	<input type="text"/>	<input type="text"/>
Sibling 6	<input type="text"/>	<input type="text"/>

Note: '0' may be entered in the box if there are no brothers and sisters or wherever the number is less than 6.

E. OCCUPATION OF PARENTS/GUARDIANS

8. Only main occupation is to be entered. Use the appropriate code given below

00: If father or mother is not alive or information not applicable

01: Household/Housewife

02: Farmer (Cultivates own land)

03: Poultry farming

04: Agricultural labour

05: Picking forest produce

06: Domestic servant

07: Street vendor

08: Manual unskilled worker

09: Skilled worker

10: Clerical worker

11: Shopkeeper

12: Employer/Businessman (employing wage workers)

13: Manager/Senior officer/Professional

14: Other: (Specify) _____

a. Father (00-14)

b. Mother (00-14)

c. Guardian (00-14)

F. SCHOOLING AND RELATED ACTIVITIES

9. Details of failure/detention if any:

Class	Whether Detained (1: Yes 2: No)	Number of times detained
I	<input type="checkbox"/>	<input type="checkbox"/>
II	<input type="checkbox"/>	<input type="checkbox"/>
III	<input type="checkbox"/>	<input type="checkbox"/>
IV	<input type="checkbox"/>	<input type="checkbox"/>
V	<input type="checkbox"/>	<input type="checkbox"/>

10. Does any member of your family help you with your studies ?

☐

1: Yes 2: No

11. Who helps you with your Studies? (Enter '0' if not applicable)

1: Yes 2: No

1. Father/Guardian

1

2

☐

2. Mother

1

2

☐

3. Elder brother/sister

1

2

☐

4. Other (Specify _____)

1

2

☐

12. Do you take private tuitions?

1: Yes 2: No

☐

G. TEACHING LEARNING PROCESS

13. Does your Teacher come to class (1 - 4) ☐
- 1: Everyday
2: Most of the days
3: Sometimes
4: Rarely
14. What happens when the teacher is absent? (1 - 5) ☐
- 1: You work on your own
2: Another student supervises the work
3: Another teacher comes to teach
4: Your class is combined with another class
5: Play/go home
15. Does your teacher give you dictation? (1 - 3) ☐
- 1: Most often
2: Sometimes
3: Never
16. Does your teacher give you arithmetic problems to solve in the class? (1 - 3) ☐
- 1: Most often
2: Sometimes
3: Never
17. Does your teacher give home work related to Environment Studies (1 - 3) ☐
- 1: Most often
2: Sometimes
3: Never
18. Is the classwork assigned to you being checked? (1 - 2) ☐
- 1: Yes 2: No
19. Who checks your classwork ? (0 - 3) ☐
- 0: Not applicable
1: Teacher
2: Some other student
3: Yourself

20. Do you receive help when you face difficulty in doing the class work?

(1 - 2)

1: Yes 2: No

21. How often are you given tests?

(1 - 4)

1: Once in a month

2: Once in a term

3: Once in a year

4: Never

22. Does your teacher tell you about your performance in the tests?

(0 - 3)

0: Not applicable

1: Most often

2: Sometimes

3: Never

23. Does your teacher give you homework?

(1 - 2)

1: Yes 2: No

24. Does your teacher correct your homework?

(0 - 3)

0: Not applicable

1: Most often

2: Sometimes

3: Never

25. Do you read newspapers/magazines?

(1 - 2)

1: Yes 2: No

H. ATTENDANCE

26. Total Attendance of the pupil (from class record for last academic year)

No. of school working days	Attendance of the student
<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>

Appendix- III

States and Union Territories Selected for Tryout and Final Survey

S.No.	State	Tried out	Final Survey	Primary Stage	Medium of Instruction
1	Andhra Pradesh	√	√	IV	Telugu
2	Arunachal Pradesh	√	√	V	English
3	Assam	√	√	IV	Assamese
4	Bihar	√	√	V	Hindi
5	Chhatisgarh	-	√	V	Hindi
6	Delhi	√	√	V	English
7	Goa	√	√	IV	Gujarati
8	Gujarat	√	√	IV	Hindi
9	Haryana	√	√	V	Hindi
10	Himachal Pradesh	√	√	V	English, Hindi, Urdu
11	Jammu and Kashmir	√	√	V	Hindi
12	Jharkhand	-	-	V	Hindi
13	Karnataka	-	√	V	Kannad
14	Kerala	-	√	IV	Malyalam
15	Madhya Pradesh	√	√	V	Hindi
16	Maharashtra	√	√	IV	Marathi
17	Manipur	√	√	V	Manipur, English
18	Meghalaya	√	-	IV	Garo/Khasi
19	Mizoram	√	√	V	Mizo
20	Nagaland	-	√	IV	English
21	Orissa	√	√	V	Oriya
22	Punjab	√	√	V	Punjabi
23	Rajasthan	√	√	V	Hindi
24	Sikkim	-	√	V	English
25	Tamil Nadu	√	√	V	Tamil
26	Tripura	-	√	V	Bengali
27	Uttar Pradesh	√	√	V	Hindi
28	Uttaranchal	-	√	V	Hindi
29	West Bengal	√	√	IV	Bengali
UTs					
30	A & N Island	-	√	V	English/Bengali
31	Chandigarh	√	√	V	Hindi
32	Daman and Diu	-	-		English
33	D & N Haveli	-	-		
34	Lakshdweep	-	-		
35	Pondicherry	-	√	IV	Tamil, Telugu, Malyalam

Appendix IV

List of Sampled Districts, Schools, Teachers and Students

S. No.	State	No. of Districts	Names of Sampled Districts	No. of Sampled Schools		No. of Sampled Teachers		No. of Sampled Students	
				R	U	M	F	B	G
1.	Andhra Pradesh	22	Hyderabad, Medak, Cuddapah, Nellore	156 (77 + 79)		329 (181 + 148)		2333 (1107+1226)	
2.	Arunachal Pradesh	13	Tirap, Papumparea*, Changlang, West Kameng	124 (111 + 13)		279 (212 + 67)		1571 (847 + 724)	
3.	Assam	23	Nalbari, Dibrugarh, Karbi Anglong, Kamrup	169 (133 + 36)		501 (353 + 148)		3689 (1784+1905)	
4.	Bihar	37	Gaya, Jamui*, Bhagalpur*, Sitamarhi	84 (09 + 15)		248 (182 + 6)		2239 (1311+928)	
5.	Chhattisgarh	16	Sarguja, Rajnandgaon, Bastar, Raipur	188 (157 + 31)		271 (198 + 73)		2597 (1434+1163)	
6.	Delhi	9	New Delhi, West Delhi, North-West, North East	200 (56 + 144)		423 (109 + 314)		5876 (2876+3000)	
7.	Goa	2	South Goa	44 (33 + 11)		130 (37 + 93)		1231 (650+581)	
8.	Gujarat	26	Gandhi Nagar, Bhavnagar, Panchmahal, Junagarh*	137 (114 + 23)		152 (103 + 49)		2453 (1379+1074)	
9.	Haryana	19	Kaithal, Rohtak, Hissar, Panchkula	192 (155 + 37)		433 (201 + 232)		4604 (2407+2197)	
10.	Himachal Pradesh	12	Chamba, Kangra, Kinnaur, Shimla	200 (176 + 24)		599 (404 + 195)		4553 (2227+2326)	
11.	Jammu & Kashmir	14	Budgam*, Srinagar*, Leh, Jammu	100 (82 + 18)		286 (119 + 167)		1247 (558+689)	
12.	Karnataka	32	Gulbarga South, Dharwad, Kodagu, Bangalore South	200 (144 + 56)		489 (161 + 328)		3853 (2001+1852)	
13.	Kerala	14	Malappuram, Ernakulam, Thiruvananthapuram, Trichur	187 (139 + 48)		537 (172 + 365)		4342 (2165+2177)	
14.	Madhya Pradesh	45	Mandour, Shivpuri, Damoh, Rewa, Bhopal	250 (191 + 59)		356 (223 + 133)		3791 (2082+1709)	
15.	Maharashtra	34	Mumbai, Beed, Amaravati, Satara	195 (129 + 66)		520 (329 + 191)		4981 (2521+2460)	
16.	Manipur	09	Thoubal, Chandel*, Churachandpur, Imphal East	145 (119 + 26)		428 (320 + 108)		2140 (1083+1057)	
17.	Meghalaya	07	Jainta Hills*, South Garo Hill*, East Garo Hills*, East Garo Hills*	-		-		-	
18.	Mizoram	08	Champhai, Aizawal, Kolasib, Lawngthai	169 (83 + 86)		459 (345 + 112)		2392 (1220+1172)	
19.	Nagaland	08	Kohima, Tuensang, Dimapur, Workha	72 (63 + 9)		77 (57 + 20)		1038 (491 + 547)	
20.	Orissa	30	Sambalpur, Khurda, Raygarh, Balasore	200 (161 + 39)		395 (278 + 117)		2979 (1551+ 1422)	
21.	Punjab	17	Hoshiarpur, Ludhiana, Amritsar, Sangrur	185 (147 + 38)		311 (92 + 219)		3143 (1589+1554)	
22.	Rajasthan	32	Jaipur, Udaipur, Jalore, Jhunjuna	193 (159 + 34)		480 (324 + 156)		2357 (1312+1045)	

S. No.	State	No. of Districts	Names of Sampled Districts	No. of Sampled Schools		No. of Sampled Teachers		No. of Sampled Students	
				R	U	M	F	B	G
23	Sikkim	04	East Sikkim, North Sikkim, South Sikkim, West Sikkim	158 (150 + 8)		469 (326 + 143)		2451 (1143+1308)	
24.	Tamil Nadu	30	Tiruvanamalai, Karur, Tirundveli, Chennai	197 (128 + 69)		341 (136 +205)		4768 (2396+2372)	
25.	Tripura	04	West Tripura, South Tripura, North-Tripura, Dhalai Tripura	163 (139 + 24)		479 (367 + 112)		1587 (792 + 795)	
26	Uttar Pradesh	70	Bijnor, Agra, Lakhimpur Khiri, Gorakhpur, Pratapgarh, Chitrakoot, Lucknow	349 (281 + 68)		560 (380 + 180)		5098 (2699+2399)	
27.	Uttaranchal	13	Chamoli, Almora, Dehradun, Udham Singh Nagar	197 (149 + 48)		345 (153 +192)		2741 (1348+1393)	
28.	West Bengal	18	Jalpaiguri, Kolkata, Purulia, North 24 Parganas	196 (120 + 76)		577 (360 + 217)		4739 (2431+2308)	
Total		561	113						
29.	A & N Island	01	A & N Island	43 (34 + 9)		115 (49 + 66)		811 (420 + 391)	
30.	Chandigarh	01	Chandigarh	50 (20 + 30)		93 (5 + 88)		1405 (657 + 748)	
31.	Pondicherry	01	Pondicherry	44 (26 + 18)		116 (48 + 68)		1262 (649 + 613)	
Grand Total		564	116	4787		10796		88271	

* These districts were selected but survey could not be completed due to various reasons.

Appendix V

Items Parameters

Facility Value (FV) and Discrimination Index (DI) for Class V

Achievement Tests—All India

Q.No.	EVS		Mathematics		Language	
	FV	DI	FV	DI	FV	DI
1.	49.74	0.53	63.48	0.47	80.79	0.33
2.	41.21	0.32	70.61	0.5	71.54	0.41
3.	50.6	0.42	53.95	0.52	69.3	0.4
4.	35.41	0.5	-	-	76.98	0.34
5.	57.8	0.51	60.64	0.49	74.09	0.37
6.	43.03	0.47	43.58	0.5	76.9	0.36
7.	55.14	0.6	49.37	0.49	71.66	0.36
8.	62.39	0.55	73.01	0.49	72.78	0.42
9.	43.79	0.51	56.35	0.62	76.44	0.37
10.	48.98	0.58	61.63	0.61	68.11	0.48
11.	44.41	0.43	39.2	0.49	68.58	0.42
12.	33.63	0.37	68.29	0.62	59.48	0.43
13.	71.65	0.54	45.21	0.59	63.6	0.37
14.	65.79	0.6	52.65	0.67	46.03	0.4
15.	42.26	0.67	50.14	0.66	47.17	0.46
16.	48.16	0.57	48.75	0.62	37.26	0.54
17.	62.08	0.6	35.23	0.52	51.22	0.52
18.	41.54	0.56	49.69	0.62	49.55	0.51
19.	51.44	0.63	52.84	0.62	62.2	0.55
20.	71.39	0.41	65.86	0.57	53.19	0.51
21.	28.75	0.28	59.15	0.65	63.86	0.53
22.	36.23	0.34	38.13	0.53	61.32	0.47
23.	42.92	0.39	27.51	0.22	49.89	0.39
24.	46.78	0.4	50.95	0.74	51.56	0.51
25.	43.75	0.45	31.13	0.54	54.81	0.61
26.	43.27	0.65	28.34	0.34	77.11	0.46
27.	49.63	0.62	36.73	0.64	72.54	0.55
28.	50.71	0.52	37.4	0.5	59.28	0.61
29.	45.94	0.63	22.95	0.21	56.88	0.63
30.	63.79	0.44	52.15	0.61	43.91	0.54
31.	52.98	0.44	-	-	58.93	0.57
32.	57.17	0.59	38.61	0.57	42.15	0.41
33.	55.95	0.61	45.65	0.49	51.66	0.35
34.	59.82	0.5	29.68	0.53	60.3	0.4
35.	59.42	0.62	35	0.4	45.9	0.47
36.	52.27	0.61	35.08	0.41	38.48	0.18
37.	61.81	0.57	26.49	0.3	55.46	0.65
38.	40.48	0.62	45.28	0.55	32.85	0.38
39.	61.53	0.51	37.87	0.53	32.67	0.42
40.	38.19	0.51	48.63	0.59	68.27	0.48

Appendix VI

List of State Coordinators

S. No.	State	Name and Address
1.	Andhra Pradesh	Dr. G. Jagan Mohan & KPA Choudhary SCERT, Opposite Lal Bahadur Stadium Hyderabad 500001
2.	Arunachal Pradesh	Shri K.R. Azmi Vice Principal State Institute of Education Arunachal Pradesh, Changlang 792 120
3.	Assam	Shri D.K. Dutta Lecturer State Council of Educational Research and Training Kahilipara, DPEP, Guwahati 19
4.	Bihar	Shri Nagendra Nath State Council of Educational Research and Training Patna, Mahendru, Bihar 800 006
5.	Chhatisgarh	Prof. R.C. Pandwa DIET Campus Shankar Nagar SCERT, Chhatisgarh, Raipur 492 007
6.	Delhi	Mrs. Sarijata Dass Lecturer SCERT, Varun Marg Defence Colony, New Delhi 110 024
7.	Goa	Shri Santosh Amonkar Subject Inspector (Maths) State Institute of Education Alto Porvorim, Goa 405 521
8.	Gujarat	Dr. N. Pandit Director GSCERT, Sector 21, Gandhinagar, Gujarat- 382 021
9.	Haryana	Dr. H.G. Arora Subject Specialist State Council of Educational Research and Training Gurgaon 122 001
10.	Himachal Pradesh	Dr. Kalpna Bhardwaj SCERT, Himachal Pradesh Robon, Solad 73 211
11.	Jammu and Kashmir	Shri Basharat Ahmed Field Adviser State Institute of Education Maulana Azad Road, Srinagar Jammu and Kashmir 180 001
12.	Karnataka	Smt. Lalita Chanderlekha Assistant Director DSERT, P.O. Wadia Road, Basavanagudi Bangalore 560 004
13.	Kerala	Dr. E.S. Rameshan Assistant Professor SCERT, Vidhya Bhavan, Poojapura Thiruvananthapuram, Kerala
14.	Madhya Pradesh	Dr. U.K. Dewan Rajiv Shiksha Kendra Pustak Bhawan, B Wing TBC Arera Hills, Bhopal 462 011

S. No.	State	Name and Address
15.	Maharashtra	Shri Shivaji Tambe MSCERT, Pune 708, Sadashiv Peth Kumthekar Road Pune 411 030
16.	Manipur	Shri S. Nabachandran Chairman Board of Secondary Education, Manipur Imphal 795 001
17.	Mizoram	Mr. Malaswanthagi Joint Director SCERT Mizoram, Aizwal 796 012
18.	Nagaland	Shri Vipralhou Kesiezie Joint Director SCERT Nagaland Kohima
19.	Orissa	Shri N. Jena Reader in Education SCERT Bhubaneswar Unit IV Orissa 751 001
20.	Punjab	Shri Karnail Singh Deputy Director (Evaluation) SCERT, Punjab S.C.O. 667, Sector-17-A Chandigarh
21.	Rajasthan	Mrs. Sita Sharma Senior Lecturer 111, Saheli Marg SCERT Udaipur (Rajasthan) 313 001
22.	Sikkim	Mrs. Beena Bhandari Joint Director (Academic) SIE, P.O. Rajbharan Gangtok
23.	Tamil Nadu	Smt. Laxmi Joint Director DTERT, College Road Chennai 600 006
24.	Tripura	Mrs. Jay Deb Burman Joint Director SCERT, Tripura Agartala, P.O. Abhoynagar 700 005
25.	Uttar Pradesh	Dr. Mukesh Kumar Lecturer SCERT, JBTC Campus Nishatganj Lucknow (U.P.)
26.	Uttaranchal	Shri N.C. Kabadwal Deputy Director 21, Subhash Road Parade Ground, Dehradun



Appendices

S. No.	State	Name and Address
27.	West Bengal	Dr. S.K. Sarkar Secretary West Bengal Board of Primary Education 84, Sarat Bose Road Calcutta 26
28.	A & N Island	Shri Shahkeel Mohammad Tutor SIE, Shiksha Sadan Port Blair Andaman and Nicobar Island 744 101
29.	Chandigarh	Mrs. Amrit Kaur Lecturer SIE, Sector 32 Chandigarh 792 120
30.	Pondicherry	Mr. G. Rajashekar Opposite PIPMATE Lawspet Pondicherry 605 008